IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Weinberger et al.
Appl. No.	:	10/789,169
Filed	:	February 27, 2004
For	:	EFFECT OF BDNF GENOTYPE ON HIPPOCAMPAL FUNCTION AND VERBAL MEMORY AND RISK FOR SCHIZOPHRENIA
Examiner	:	Sitton, Jehanne Souaya
Group Art Unit	:	1634

DECLARATION UNDER 37 CFR 1.132 OF DANIEL R. WEINBERGER, M.D.

I, Daniel R. Weinberger, M.D., do hereby declare:

1. Introduction

I am a named inventor of the above-identified application. A true and correct copy of my Curriculum Vitae is attached as Exhibit 1.

2. Compliance with 35 USC 112/1 enablement

I understand that the United States Patent and Trademark Office (USPTO) rejected the claims under 35 USC 112/1 as failing to meet the enablement requirement. I understand that the test for enablement is whether one skilled in the art could make or use the subject matter defined by the claims without undue experimentation. I understand that the "Wands" factors (the nature of the invention and breadth of the claims, the amount of direction/guidance and presence/absence of working examples, the state of the prior art and the predictability or unpredictability of the art, the level of skill in the art, and the quantity of experimentation needed to make or use the invention) are to be considered in determining whether any necessary experimentation is undue. Here, the specification is enabling with respect to the claimed subject matter. Thus, here, considering all the factors related to the enablement issue, it must be concluded that the specification is enabling with respect to the claims at issue.

3. **Nature of the invention and breadth of the claims:**

a. **Claims 1 and 2,**

and claims dependent thereon, are related to methods for predicting the likelihood that a human will have impaired or enhanced hippocampal function, or hippocampal dependent verbal memory, comprising the steps of obtaining a DNA sample from a human to be assessed and determining the presence or absence of a single nucleotide polymorphism from G to A resulting in the substitution of a methionine residue for a valine residue at amino acid position 66, relative to the start of the precursor protein sequence for brain-derived neurotrophic factor (BDNF), where a single nucleotide polymorphism from G to A resulting in the substitution of a methionine residue for a valine residue at amino acid position 66 (relative to the start of the precursor protein sequence) is indicative of the likelihood that a human will have impaired hippocampal function, or hippocampal dependent verbal memory, relative to valine, and a single nucleotide polymorphism from A to G resulting in the substitution of a valine residue for a methionine residue at amino acid position 66 (relative to the start of the precursor protein sequence) is indicative of the likelihood that a human will have enhanced hippocampal function, or hippocampal dependent verbal memory, relative to methionine.

b. **Claims 13 and 14,**

and claims dependent thereon, are related to methods for predicting the likelihood than a human will have impaired or enhanced hippocampal function, or hippocampal dependent verbal memory, comprising the steps of obtaining a biological sample from a human to be assessed containing the precursor BDNF protein or relevant portion thereof and determining the amino acid present at amino acid position +66 relative to the first amino acid of the precursor protein, wherein the presence of methionine at this position is indicative of the likelihood that a human will have impaired hippocampal function, or hippocampal dependent verbal memory, relative to valine, and the presence of valine at this position is indicative of the likelihood that a human will have enhanced hippocampal function, or hippocampal dependent verbal memory, relative to methionine.

4. **The amount of direction/guidance & presence/absence of working examples:**

a. **Verbal Memory**

i. **Specification at paragraph [0008]**

The specification teaches that BDNF is a neurotrophin and that the BDNF gene contains at least one known nonconservative SNP producing a met66val substitution. The specification teaches that schizophrenia appears to involve hippocampal abnormalities, including deficits in verbal memory. The specification teaches that verbal memory deficits are also found in unaffected sibs of patients, suggesting a genetic trait related to susceptibility. The specification teaches that we hypothesized that the met66val polymorphism would affect verbal memory. The specification teaches that verbal memory was assessed in 184 patients with schizophrenia, 283 siblings, and 101 controls. The specification teaches that the effect of genotype was significant across all groups for memory scores ($p<0.008$) and that the rarer met allele was associated with poorer performance. The specification teaches that BDNF genotype had no effect on IQ or prefrontal cognitive measures.

ii. **Egan et al., Cell 112:257 (Jan 2003)**

I understand that the rule according to MPEP 2164.05 is that an applicant may provide a declaration after the filing date that demonstrates that the claimed invention works as claimed. The post-filing date art Egan et al., Cell 112:257 (Jan 2003), of record, is such a demonstration. Egan et al. 2003 provides that, despite substantial progress in animal studies, BDNF's relevance in human memory and hippocampal function has not been examined directly. In Egan et al. 2003, we examined the effects of a valine (val) to methionine (met) substitution in the 5′ pro-region of the human BDNF protein. While we found no relationship between BDNF genotype and schizophrenia, our results demonstrate that BDNF plays a role in hippocampal function and verbal memory in humans.

In a first experiment, we examined the effects of BDNF genotype on measures of verbal memory in a cohort of 641 subjects, including normal controls, patients with schizophrenia, and their unaffected siblings, using measures from the Wechsler Memory Scale, revised version (WMS-R), a test of verbal memory. Delayed recall scores from the WMS-R reflect the amount

of information from two stories with 50 total elements that subjects are able to recall following a 0.5 hr delay. Patients with schizophrenia had substantially lower scores compared to controls, while siblings were intermediate between these groups, consistent with earlier reports (Egan et al., *Proc. Natl. Acad. Sci. USA* **98**: 6917, 2001, of record; Figure 1A). In the entire sample, BDNF genotype had a significant effect on these memory scores ($F = 3.89$, $df = 2, 591$, $p = .02$). In the group of 133 controls alone, BDNF genotype also had a significant effect on memory scores ($F = 5.04$, $df = 2,130$, $p = .008$). While including patient and sibling groups did not substantially add to the results, both groups showed the same effect seen in controls with met/met subjects tending to score lower than other genotype groups (Figure 1A). Post hoc comparisons in the normal subjects alone showed that met/met homozygotes had lower scores compared to val/val ($p < .005$) and val/met ($p = .052$), while in the entire cohort, met/met homozygotes had lower scores compared to the other two genotype groups ($p = .007$). Within each group (controls, siblings, patients), each genotype group was well matched on a variety of demographic parameters (see Figure 1B), suggesting they did not account for the effect of BDNF genotype. Similar effects of BDNF genotype were seen with immediate recall scores (of the stories described above) from the WMS-R (e.g., normal group, $F = 3.65$, $df = 2,130$, $p < .03$). Post hoc comparisons again showed that met/met homozygotes had lower scores compared to val/val ($p < .01$) and val/met ($p = .07$) groups.

BDNF genotype had no significant effect in either the normal subjects or the entire cohort on a second memory test which required recall of word lists, the California Verbal Learning Test (CVLT), immediately after hearing the list (1–5 summary scores, $F = 0.79$, $df = 2, 560$; $p = .45$; post hoc comparisons $p > .14$) and again 20 min later (long delay free recall scores, $F = 0.23$, $df = 2, 560$; $p = .79$; post hoc comparisons $p > .37$). The CVLT is considered to have a larger "prefrontal component" (Kopelman et al., *Brain* **121**: 875, 1998, of record) compared to the WMS-R, thus excluding it as a test of verbal memory that is hippocampal dependent, and leaving the WMS-R as a valid test of hippocampal dependent verbal memory. No effect of BDNF genotype was seen on other types of memory, such as semantic memory ($F = 0.02$, $df = 2, 591$; $p = 98$) or working memory/executive function (WCST, $F = 0.33$, $df = 2, 590$; $p = .71$) (Figure 1B).

These results indicate that the val66met polymorphism exerts its most robust effects on hippocampal dependent verbal memory.

b. IQ and Prefrontal Cognitive Measures

Our results also speak to a current debate about the genetics of human intelligence. Specific cognitive abilities are partially correlated, and the extent of this correlation is referred to as "g", synonymous with IQ. Much genetic epidemiological data suggest that the genetic determinants of different cognitive abilities largely overlap with each other and with IQ. In other words, genes influence specific cognitive traits by virtue of their "top down" effects on g. The alternative "bottom up" view that genes contribute to IQ primarily through their unique and more direct effects on specific cognitive modules has found little support. The present data are consistent with the latter formulation. We did not detect an effect of BDNF on IQ or any other cognitive ability. A recent study of the role of the COMT gene on working memory and prefrontal physiology, but not IQ, provides further evidence for this view (Egan et al. 2001, above). Our current data suggest that the effects of BDNF and COMT are somewhat specific and mediated through "modular" cognitive elements.

c. Hippocampal Function

i. Specification at paragraph [0008]

The specification teaches that schizophrenia also appears to involve abnormal patterns of hippocampal activation during memory tasks assessed with functional magnetic resonance imaging (fMRI). The specification teaches that abnormal hippocampal activation is also found in unaffected sibs of patients. The specification teaches that, in two separate cohorts studied with fMRI, subjects with a met allele had abnormal patterns of hippocampal activation while performing memory tasks, compared to val/val homozygote subjects.

ii. Egan et al., Cell 112:257 (Jan 2003)

The post-filing date art Egan et al., Cell 112:257 (Jan 2003), of record, demonstrates that, with regard to this additional aspect of the invention, the claimed invention works as claimed. To further characterize the effects of BDNF genotype, we performed an in vivo assay of hippocampal physiology using the blood oxygenation level dependent (BOLD) fMRI technique

in subjects performing the N-back working memory task. The brain network subserving the N-back task (which is not a test of verbal memory per se) is thought to involve primarily neocortical regions, particularly dorsolateral prefrontal cortex. However, these tasks also produce a robust and reliable deactivation or disengagement of the hippocampus. Hippocampal deactivation has been reported to be disrupted in clinical pathological states. We hypothesized, therefore, that the BDNF met allele would disrupt the normal hippocampal fMRI disengagement pattern during performance of the N-back working memory task.

We studied two independent cohorts of healthy subjects (patients were not included), each comprised of val/met and val/val genotype subgroups; no met/met subjects were included due to their low population frequency (< 5%). The members of the cohorts were selected so that N-back performance, age, and gender did not differ between the genotype subgroups. In the first cohort, val/met individuals had an abnormal pattern of increased activation of bilateral caudal hippocampus. In contrast, val/val subjects showed the characteristic hippocampal deactivation pattern. Directly comparing val/val and val/met subjects showed this difference to be statistically significant (see Figure 2). More specifically, restricting the analysis to the medial temporal lobes revealed two clusters of activation showing the inappropriate overactivation of val/met subjects in bilateral hippocampus that were significant at the set level ($p < 0.05$, $c = 2$) (Figure 2A). To replicate this unusual finding, we examined a second cohort of healthy subjects (patients not included). Val/met subjects again showed an abnormal pattern of increased bilateral hippocampal activation compared to baseline while val/val subjects again showed deactivation. Direct comparison of the two genotype groups again showed significant differences in hippocampal locales (Figure 2B).

Because these healthy subjects were matched prior to the experiment on task performance to remove this as a potential confounder, it cannot account for these findings (Figure 2C). Within each cohort, genotype groups were also matched on demographic variables, suggesting they did not account for the BDNF effects. One exception was a slight difference in full scale IQ and WMS-R scores in the second cohort (Figure 2C). However, adding IQ as a covariate again revealed significant bilateral clusters of differential caudal hippocampal activation. To ensure the differences between groups were not due to uneven sample sizes, all analyses were also

performed using subsets with the same number of subjects in each genotype group. The results were essentially identical. Scatter plots did not reveal outliers. In summary, in two cohorts we found abnormal activation of hippocampus in val/met subjects compared to the normal pattern of deactivation in val/val subjects. Although this was seen in the context of a working memory task, which is typically more dependent on prefrontal function, and although the mechanism by which val66met might produce this effect is uncertain,[1] the data indicate that the BDNF met allele relative to val is associated with a qualitatively altered hippocampal response.

d. Extension to Different Ethnicities

Although I understand that the USPTO takes the position that in previous studies investigating the association between BDNF genotype and neuropsychiatric disorders, northern Europeans appear to be much more affected than Asian populations, suggesting that some ethnicities may compensate for the variation in the BDNF gene, because we see identical effects in one ethnic group alone (European Americans) and because similar effects are seen in both the normal controls and our schizophrenia families, said ethnicities should be equally affected by the presence of this polymorphism.

5. The state of the prior art and the predictability or unpredictability of the art:

Although I understand that the PTO takes the position that the BDNF polymorphism has been linked to altered susceptibility to various neuropsychiatric disorders, such as Alzheimer's disease, Parkinson's disease, depression, eating disorders, and bipolar disorder, in conclusion, we did not find evidence that BDNF was associated with increased risk for schizophrenia, nevertheless, because this polymorphism has significant effects on verbal memory and hippocampal activation, the met allele may affect other human illnesses, including Alzheimer's disease, head trauma, various psychiatric conditions, and even normal aging.

[1] I understand that the rule according to MPEP 2164 is that it is not a requirement of patentability that an inventor understand how or why the invention works.

6. The level of skill in the art:

I understand that according to *Amgen Inc. v. Hoechst Marion Roussel Inc.*, 57 USPQ2d 1449, 1518 (D. Mass. 2001), the level of skill in the molecular biology art was considered that of a postdoctoral fellow working in the laboratory. Thus, the level of skill in the art was high.

7. The quantity of experimentation needed to make or use the invention:

At the time of the 31 August 2001 priority date, for guidance regarding such conditions, refer to, for example, Sambrook et al., 1989, Molecular Cloning, A Laboratory Manual, Cold Spring Harbor Laboratory Press, New York; and Ausubel et al., 1989, Current Protocols in Molecular Biology, Green Publishing Associates, Inc., and Wiley & Sons, Inc., New York. Verbal Memory: Neuropsychological tests were known in the art, e.g., Egan et al., Biol. Psychiatry 50: 98 (Nov 2001), of record, and Weickert et al., Arch. Gen. Psychiatry 57: 907 (2000), of record. Hippocampal Function: Functional magnetic resonance imaging was known in the art, e.g., Callicott et al., Cereb. Cortex 10: 1078 (Nov 2000), of record, and Ogawa et al., Proc. Natl. Acad. Sci. USA 89: 5951 (1992), of record. Antibodies that specifically recognize the BDNF valine66 but not the BDNF methionine66 variant: Refer to, for example, Harlow and Lane, 1988, Antibodies, A Laboratory Manual, Cold Spring Harbor Laboratory Press, New York, describing how an antibody may be raised against a unique peptide sequence by synthesizing the peptide, conjugating it for immunization, immunizing rabbits, purifying the antibodies against the immunizing peptide, and examining the specificity of antibodies by western blot, all as shown by Zhou et al., J. Neurochem. 91: 704 (2004), of record, in which an antibody is produced that specifically recognizes the precursor BDNF, but not mature BDNF, by western blot. Similarly, one possessing the ordinary level of skill in the pertinent art at the time the invention was made could produce an antibody that specifically recognizes the amino acid present at amino acid position +66 relative to the first amino acid of the precursor BDNF protein for determining the presence of methionine or valine at this position.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful, false statements may jeopardize the validity of the application or patent issuing therefrom.

Respectfully submitted,

Dated: 6/14/07

By: _____
Daniel R. Weinberger, M.D.

3863932
061107

EXHIBIT 1

Updated 12/8/06

CURRICULUM VITAE

Daniel R. Weinberger, M.D.
Director, Genes, Cognition and Psychosis Program, DIRP, NIMH
10 Center Drive, Room 4S237B MSC 1379
Bethesda, MD 20892
weinberd@mail.nih.gov

Education:

1969-B.A. The Johns Hopkins University
1973-M.D. The University of Pennsylvania

Professional Positions:

2003-	Director: Genes, Cognition and Psychosis Program, Intramural Research Program, National Institute of Mental Health (NIMH), National Institutes of Health (NIH), Bethesda, MD 20892
1998-	Chief, Clinical Brain Disorders Branch, Intramural Research Program, NIMH, NIH Bethesda, MD 20892
1986-1998	Chief, Clinical Brain Disorders Branch, Intramural Research Program, National Institute of Mental Health (NIMH), Neuroscience Center at Saint Elizabeths, Washington, D.C. 20032
1983-1988	Director, Behavioral Neurology Service, Saint Elizabeths Hospital, Washington, D.C.
1983-1986	Director of Movement Disorder, Dementia Clinic, Experimental Therapeutics Branch NINDS, NIH, Bethesda, Maryland.
1983-1986	Chief, Section on Clinical Neuropsychiatry and Neurobehavior, Neuropsychiatry Branch, Intramural Research Program, National Institute of Mental Health (NIMH), Saint Elizabeths Hospital, Washington, D.C.
1981-1982	Head, Clinical Neuropsychiatry and Neurobehavior Unit, Adult Psychiatry Branch, Intramural Research Program, NIMH, Saint Elizabeths Hospital.
1977-1981	Staff Psychiatrist, National Institute of Mental Health.

1977-1978 Research Ward Director, Adult Psychiatry Branch, Intramural Research Program, National Institute of Mental Health.

Professional Training:

1980-1983 Resident in Neurology, George Washington University Medical Center, Washington, D.C.
1976-1977 Chief Resident, Massachusetts Mental Health Center, Boston, Massachusetts.
1975-1976 Associate in Medicine (Psychiatry Division), Peter Bent Brigham Hospital, Boston, Massachusetts.
1974-1976 Resident in Psychiatry, Massachusetts Mental Health Center, Boston, Massachusetts.
1973-1974 Intern (R-1, Medicine), UCLA L.A. County-Harbor General Hospital, Torrance, California.

Academic Appointments:

1995 Clinical Professor of Psychiatry and Neurology, George Washington University, School of Medicine, Washington, D.C.
1993-1995 Clinical Professor of Psychiatry, Ohio State University School of Medicine, Columbus, Ohio.
1984-1994 Associate Clinical Professor of Neurology and Psychiatry, George Washington University School of Medicine, Washington, D.C.
1982-1984 Associate Clinical Professor of Psychiatry, George Washington University School of Medicine, Washington, D.C.
1978-1981 Assistant Clinical Professor of Psychiatry, George Washington University.
1974-1977 Clinical Fellow in Psychiatry, Harvard Medical School.
1973-1974 Graduate Fellow in Medicine, UCLA School of Medicine.

Additional Professional Activities:

1999-2002 Founder, Director, Consultant – Biognosis, US, Inc. – A translational genomics biotechnology company
1995-1999 Founder, Director, Contemporary Biobehavior Research, LLC. - A clinical trials SMO. Sold 3/99 to Comprehensive NeuroScience, Inc.
1978- General Psychiatric and Neurologic Practice (Part-time), 5415 Connecticut Avenue, Washington, D.C.
1979-1990 Examiner, American Board of Psychiatry and Neurology.
1974-1977 Emergency Room Physician, Cardinal Cushing General Hospital, Brockton, Massachusetts.
1974-1976 General Medical Practice (Part-time), Bridgewater Medical Center, East Bridgewater, Massachusetts.

Medical Specialty Board Certification:

1978-American Board of Psychiatry and Neurology (Psychiatry)
1984-American Board of Psychiatry and Neurology (Neurology)

Journal Editorial Boards:

1986-2006 Biological Psychiatry (Associate Editor, 1997)
1987- International Journal of Schizophrenia Research
1987- Journal of Neuropsychiatry and Clinical Neuroscience
1987- 2004 Psychiatry
1989-1996 Progress in Neuropsychiatry and Psychopharmacology
1990- Psychiatry Research: Neuroimaging
1990- Journal of Psychiatry and Neuroscience
1991-2006 Neuropsychopharmacology

1991-	Development and Psychopathology
1992-2001	Harvard Review of Psychiatry
1994-	Cognitive Neuropsychiatry
1994-2002	Synapse
1995-2000	Frontiers in Bioscience
1996-1999	Journal of Neural Transmission (Section Editor)
1996-2001	Neuroscience.Net
1996-2002	Lancet Neurology Network (Associate Editor)
1997-2002	Annual Review of Medicine
1999-	Current Psychiatry Reports
2000-	Psychopharmacology Bulletin
2000-	Journal of Clinical Psychopharmacology
2001-	NeuroImage
2002-	NeuroRx
2003-	Neuroscience Letters (Associate Editor)

Honors and Awards

Phi Beta Kappa
Alpha Omega Alpha
A.E. Benett Foundation Award for Clinical Science (1981), Society of Biological Psychiatry
Morton Prince Award (1984), American Psychopathological Association
Judith B. Silver Award (1985), National Alliance for the Mentally Ill
Arthur S. Flemming Award (1986), Washington Jaycees, for outstanding government service
Meritorious Service Medal (1987), United States Public Health Service
Joel Elkes International Award (1989), American College of Neuropsychopharmacology
Foundations Fund Prize for Research, American Psychiatric Association (1991)
Distinguished Service Medal, United States Public Health Service (1992)
Lieber Award, NARSAD, (1993)
Dean Award, American College of Psychiatrists (1994)
Gold Medal Award, Society of Biological Psychiatry (1994)
Nathaniel Winkelman Award (1994), Einstein Medical Center, Philadelphia
Kempf Fund Award (1995) American Psychiatric Association
British Medical Association Book of the Year Award (1996)
World Federation of Societies of Biological Psychiatry Research Prize (1997)
Elected into the Institute of Medicine, National Academy of Sciences (1999)
Adolf Meyer Award, American Psychiatric Association (2000)
Robert Sommer Medal, Justus Liebing University School of Medicine, Germany (2002)
Warren Foundation Award (2003) International Society of Schizophrenia Research
Russel Bullyea Award (2005), National Alliance for the Mentally Ill (inaugural recipient)
G. Burroughs Mider Award (2005), NIH Director
Roche-Nature Medicine Award for Translational Neuroscience (2006) (inaugural recipient)

Selected Honorific Lectures

1986	Marshall University School of Medicine Distinguished Lecturer
1987	University of Oklahoma School of Medicine AOA Graduation Address
1988	Roerig Visiting Professor – University of Washington, Seattle
1990	The Public Lecturer - Society for Neuroscience, 20th Annual Meeting, St. Louis
1990	Roerig Visiting Professor - University of New Mexico
1991	Roerig Visiting Professor – University of Michigan
1992	Neal Mysell Lecture - Harvard Medical School
1995	First Memorial James Cleghorn Lecture - McMaster University School of Medicine

1999 Pfizer Visiting Professor – Baylor University
1999 Harold Cooper Lectureship – University of Texas, Houston
2000 Allene Rubin Memorial Lecture – Johns Hopkins University School of Medicine
2001 The Field Lecture – University of Minnesota School of Medicine
2002 Thomas L. O'Donohue Memorial Lecture in Neuropharmacology – Howard University College of Medicine
2003 Abraham Ribicoff Lecture – Yale University School of Medicine
2003 Sir Thomas Finch Memorial Lecture and Visiting Professor, University of Sheffield College of Medicine, England
2003 Paul Jansen Lecture, Institute of Psychiatry, London
2003 Thomas Smith Lecture, National Institute of Psychobiology, Hebrew University, Jerusalem
2005 The G. Burroughs Mider Lecture – NIH
2007 Williams B. Abrams Lecture – FDA

Institution and Industry Advisory Boards

1990 Alzheimer Disease Foundation
1993 Adams Super-Center for Brain Studies, Tel Aviv University
1993 Sandoz Advisory Board (Clozapine)
1995 Jansen Advisory Board (Risperidone)
1995 Abbott Advisory Board (Sertindole)
1996 Zeneca Advisory Board (Seroquel)
1996 Pharmacia and Upjohn CNS Advisory Board
1996 Knoll Pharmaceuticals CNS Advisory Board
1997 NARSAD Council
1997 Eli Lilly Neuroscience Advisory Board
1998 Karolinska Institute CNS Advisory Board
1999 Lieber Center, Columbia University
2000 Astra-Zeneca CNS advisory board
2001 Domenici Institute for Mental Illness/Neuroscience Discovery (MIND) Scientific Advisory Board
2002 NAMI Scientific Council
2004 Ohio State Program in Pharmacogenetics

Organizations (offices held):

American Medical Association
American Psychiatric Association
Washington Psychiatric Society
American Association for the Advancement of Sciences
Society of Biological Psychiatry - (President 1998-99)
American Academy of Neurology
Behavioral Neurology Society
Washington Neurology Society
American College of Neuropsychopharmacology (fellow 1991)(President 2005)
Society for Neuroscience
American Neuropsychiatric Association
American Neurological Association
American College of Psychiatrists (Fellow 2001)

Selected Committees

1999-2002 Chairman, Scientific Committee, World Federation of Societies of Biological Psychiatry
1999-2001 Chairman, NIH 3T Users Committee

1998-2001 NIH Central Tenure Committee
1998-1999 NIH Clinical Research Revitalization Committee
1995-1998 Elected to Executive Council, American College of Neuropsychopharmacology
1995-1998 Elected to Executive Council, Winter Conference on Brain Research
1994-1997 Scientists Promotion Review Committee, NIMH
1993-1995 Scientific Program Committee, American Academy of Neurology
1993-2000 Steering Committee, NIH In Vivo NMR Center
1985-1988 Elected to Council of the Assembly of Scientists-NIMH/NINDS

NIH Extramural Grant Mentorship/Consulting

Numerous RO-1 and K awards
Yale NIMH Clinical Research Center
University of Pittsburgh NIMH Neuroscience Center
University of North Carolina NIMH Clinical Research Center
Mt. Sinai MIRECC
Baylor University MIRECC

Military Service:

1977Lt. Cdr. (0-4) USPHS
1982Cdr. (0-5) USPHS
1986Cpt. (0-6) USPHS (exceptional capability promotion)

Patents

1) Neonatal Ventral Hippocampal Excitotoxic Lesion as a Rodent Model of Schizophrenia for Testing and Developing Antipsychotic Treatments (domestic and international patents (U.S. patent No. 07/967,367)

2) A Simple and Rapid Method to Prepare Optically Pure 3-Quinuclidinyl-4-[123I]iodobenzilate Isomers from Stannylate QNB Precursor as a SPECT Imaging Agent for Muscarinic Acetylcholine Receptors (U.S. patent No. 08/229,837)

Non-Federal Grant Support

NARSAD Young Investigator Awards:

1989-90 - Neuroanatomical and neuropathological analysis of mesencephalic dopamine systems in schizophrenics - Hyde TM

1989-91 - The neurobiology of cognitive impairment in schizophrenia - Gold JM

1990-92 - The role of the medial prefrontal cortex in the action of atypical antipsychotic drugs - Jaskiw GE

1994-96 - Genetic determinants of nigrostriatolimbic dopamine system responsiveness to pharmacological and stressful stimuli in rats with neonatal hippocampal damage - Lipska BK

1997-99 - Cortical glutamate neurons in schizophrenia and affective disorders – Bachus S

1999-01 - Non-water suppressed proton magnetic resonance spectroscopy in schizophrenia – Bertolino A

1999-01 - Novel intermediate phenotypes in schizophrenia: Functional MRI and the hippocampus – Callicott JH

1990 - NARSAD Established Investigator Award - "Development for Clinical Studies of Novel Neurochemical Imaging Agents"
1991 - Tourette's Foundation Grant - "Tourette's Syndrome in Monozygotic Twins"
1994 - CRADA - Neuromedica - "Therapeutic and Diagnostic Research Using a Novel Carrier System…"
1995 - Stanley Foundation Grant - "3-D fMRI Mapping of Working Memory in Patients with Schizophrenia and their Siblings: A Genetic Linkage Study"
1997 - CRADA - Cortex Pharmaceuticals - "Clinical Investigations of Novel Glutamate Potentiating Drugs"
2000 - NARSAD Distinguished Investigator Award - "Biological Traits and the Genetics of Schizophrenia"
2000 – CRADA – NPS Allelix – "Effects of Inhibitors of Glycine Transporters on Behavioral Deficits in the Animal Model of Schizophrenia"
2001 – CRADA – Genset, S.A.. - "Brain Expression Studies of a Novel Gene Related to Psychosis"
2002 – CRADA – Yamanouchi Pharmaceutical Co. Ltd. – "Determination of Expression of Novel G-protein Coupled Receptor Family SREB in Normal and Diseased Human Brain"

PUBLICATIONS IN PEER-REVIEWED SCIENTIFIC JOURNALS

1. Cherubin CE, Kane S, **Weinberger DR**, Wolfe E and McGinn T: Persistence of Transaminase abnormalities in former narcotic addicts. Ann Int Med 76:385-389, 1972.

2 **Weinberger DR** and Kelly MJ: Catatonia and malignant syndrome: A possible complication of neuroleptic administration. J Nerv Ment Dis 165:263-268, 1977.

3. Greenblatt DJ, Shader RI, **Weinberger DR**, Allen MD and MacLaughlin OS: Effect of a cocktail on diazepam absorption. Psychopharmacology 57:199-203, 1978.

4. Carman JS, Gillin JC, Murphy DL, **Weinberger DR**, Kleinman JE, Bigelow LB and Wyatt RJ: Effects of a selective inhibitor of type A monoamine oxidase--Lilly 51641--on behavior, sleep and circadian rhythms in depressed and schizophrenic patients. Commun Psychopharmacol 2:513-524, 1979.

5. **Weinberger DR**, Torrey EF, Neophytides A and Wyatt RJ: Lateral cerebral ventricular enlargement in chronic schizophrenia. Arch Gen Psychiatry 36:735-739, 1979.

6. **Weinberger DR**, Torrey EF, Neophytides A and Wyatt RJ: Structural abnormalities of the cerebral cortex in chronic schizophrenia. Arch Gen Psychiatry 36:935-939, 1979.

7. **Weinberger DR**, Torrey EF and Wyatt RJ: Cerebellar atrophy in chronic schizophrenia. Lancet i:718-719, 1979.

8. Luchins DJ, **Weinberger DR and Wyatt RJ**: Schizophrenia Evidence for a subgroup with reversed cerebral asymmetry. Arch Gen Psychiatry 36:1309-1311, 1979.

9. Luchins DJ, **Weinberger DR** and Wyatt RJ: Anomalous lateralization associated with a milder form of schizophrenia. Am J Psychiatry 136:1598-1599, 1979.

10. **Weinberger DR**, Kleinman JE, Luchins DJ, Bigelow LB and Wyatt RJ: Cerebellar pathology in schizophrenia: A controlled post-mortem study. Am J Psychiatry 137:359-361, 1980.

11. Jeste DV, Wagner RL, **Weinberger DR**, Rieth KG and Wyatt RJ: Evaluation of CT scans in tardive dyskinesia. Am J Psychiatry 137:247-248, 1980.

12. **Weinberger DR**, Bigelow LB, Kleinman JE, Klein ST, Rosenblatt JE and Wyatt RJ: Cerebral ventricular enlargement in chronic schizophrenia: Association with poor response to treatment. Arch Gen Psychiatry 37:11-14, 1980.

13. Donnelly EF, **Weinberger DR**, Waldman IN and Wyatt RJ: Cognitive impairment associated with morphological brain abnormalities on computed tomography in chronic schizophrenic patients. J Nerv Ment Dis 168:305-308, 1980.

14. Luchins DJ, Torrey EF, **Weinberger DR**, Zalcman S, DeLisi L, Johnson A, Rosentine N and Wyatt RJ: HLA antigens in schizophrenia: Differences between patients with and without evidence of brain atrophy. Br J Psychiatry 136:243-248, 1980.

15. Luchins DJ, **Weinberger DR**, Kleinman JE, Neckers L, Rosenblatt JE, Bigelow LB and Wyatt RJ: Human leukocyte antigen A2 and psychopathology in chronic schizophrenia. Am J Psychiatry 134:499-500, 1980.

16. **Weinberger DR**, Cannon-Spoor E, Potkin SG and Wyatt RJ: Poor premorbid adjustment and CT scan

abnormalities in chronic schizophrenia. Am J Psychiatry 137:1410-1413, 1980.

17. Freed WJ, **Weinberger DR**, Bing L and Wyatt RH: Neuropharmacological studies of phenylcyclidine (PCP)-induced behavioral stimulation in mice. Psychopharmacology 71:291-297, 1980.

18. Shore D, King SW, Kaye W, Torrey EF, Winfrey HF, Potkin SG, **Weinberger DR**, Savory J, Wills MR and Wyatt RJ: Serum and cerebrospinal fluid aluminum and circulating parathyroid hormone in primary degenerative (senile) dementia. Neurotoxicology 1:55-63, 1980.

19. Bigelow LB, **Weinberger DR** and Wyatt RJ: Synergism of combined lithium-neuroleptic therapy: A double-blind placebo-controlled case study. Am J Psychiatry 138:81-83, 1981.

20. Luchins DJ, Gillin JC, Wagner RL, DeLisi LE, Morihisa JM, **Weinberger DR**, Bigelow LB, Klein ST and Wyatt RJ: Piperidine in chronic schizophrenic patients: A controlled, double-blind study. Biol Psychiatry 16:91-95, 1981.

21. Wyatt RJ, Potkin SG, Kleinman JE, **Weinberger DR**, Luchins DJ and Jeste DV: The schizophrenia syndrome: Examples of biological tools for subclassification. J Nerv Ment Dis 169:100-112, 1981.

22. **Weinberger DR**, DeLisi LE, Neophytides AN and Wyatt RJ: Familial aspects of CT abnormalities in chronic schizophrenic patients. Psychiatry Res 4:65-71, 1981.

23. Luchins DJ, **Weinberger DR**, Torrey EF, Johnson A, Rogentine N and Wyatt RJ: HLA-A2 antigen in schizophrenic patients with reversed cerebral asymmetry. Br J Psychiatry 138:240-243, 1981.

24. DeLisi LE, Necker LM, **Weinberger DR** and Wyatt RJ: Increased whole blood serotonin concentrations in chronic schizophrenic patients. Arch Gen Psychiatry 38:647-650, 1981.

25. **Weinberger DR**, Bigelow LB, Klein ST and Wyatt RJ: Drug withdrawal in chronic schizophrenic patients: In search of neuroleptic-induced super-sensitivity psychosis. J Clin Psychopharmacol 1:120-123, 1981.

26. Potkin SG, **Weinberger DR**, Kleinman JE, Nasrallah H, Luchins D, Bigelow LB, Linnoila M, Fischer SH, Bjornsson TD, Carman J, Gillin JC and Wyatt RJ: Wheat gluten challenge in schizophrenia. Am J Psychiatry 138:1208-1211, 1981.

27. Luchins DJ, Morihisa JM, **Weinberger DR** and Wyatt RJ: Cerebral asymmetry and cerebellar atrophy in schizophrenia: A controlled post-mortem study. Am J Psychiatry 138:1501-1503, 1981.

28. DeLisi LE, **Weinberger DR**, Potkin S, Neckers LM, Shiling DJ and Wyatt RJ: Quantitative determination of immunoglobulins in CSF and plasma of chronic schizophrenic patients. Br J Psychiatry 139:513-518, 1981.

29. **Weinberger DR**, Luchins DJ, Morihisa J and Wyatt RJ: Asymmetric volumes of the right and left frontal and occipital regions of the human brain. Ann Neurol 11:97-100, 1982.

30. Jeste DV, Kleinman JE, Luchins DJ, Potkin SG and **Weinberger DR**: "Exo Uno Multi": Subtyping the schizophrenic syndrome. Biol Psychiatry 17:199-222, 1982.

31. Kleinman JE, **Weinberger DR**, Rogol AD, Bigelow LB, Klein ST, Gillin JC and Wyatt RJ: Plasma prolactin concentrations and psychopathology in chronic schizophrenia. Arch Gen Psychiatry 39:655-657, 1982.

32. Luchins DJ, **Weinberger DR** and Wyatt RJ: Schizophrenia and cerebral asymmetry detected by computed

tomography. Am J Psychiatry 139:753-757, 1982.

33. Karson CN, Bigelow LB, Kleinman JE, **Weinberger DR** and Wyatt RJ: Haloperidol induced changes in blink rates correlate with changes in BPRS score. Br J Psychiatry 140:503-507, 1982.

34. **Weinberger DR**, DeLisi LE, Perman G, Targum S and Wyatt RJ: Computed tomography scans in schizophreniform disorder and other acute psychiatric patients. Arch Gen Psychiatry 39:778-783, 1982.

35. Kleinman JE, **Weinberger DR**, Rogol A, Shiling D, Mendelson WB, Davis GC, Bunney WE and Wyatt RJ: Naloxone in chronic schizophrenic patients: Neuroendocrine and behavioral effects. Psychiatry Res 7:1-7, 1982.

36. Potkin SG, Shore D, Torrey EF, **Weinberger DR**, Gillin JC, Henkin RJ, Agarwal RP and Wyatt RJ: CSF zinc concentrations in ex-heroin addicts and patients with schizophrenia: Some preliminary observations. Biol Psychiatry 17:1315-1322, 1982.

37. Karson CN, **Weinberger DR**, Bigelow LB and Wyatt RJ: Clonazepam treatment of chronic schizophrenia: A double-blind trial. Am J Psychiatry 139:1627-1628, 1982.

38. Targum SD, Rosen LN, DeLisi LE, **Weinberger DR** and Citrin CM: Cerebral ventricular size in major depressive disorder: Association with delusional symptoms. Biol Psychiatry 18:329-336, 1983.

39. Potkin SG, **Weinberger DR**, Linnoila M and Wyatt RJ: Low CSF 5-hydroxyindoleacetic acid in schizophrenic patients with enlarged cerebral ventricles. Am J Psychiatry 140:21-25, 1983.

40. Jeste DV, Zalcman S, **Weinberger DR**, Cutler NR, Bigelow LB, Kleinman JE, Rogol A and Wyatt RJ: Apomorphine response and subtyping of schizophrenia. Prog Neuropsychopharmacol 7:83-88, 1983.

41. Reiss D, Feinstein C, **Weinberger DR**, King R, Wyatt RJ and Brallier D: Ventricular enlargement in child psychiatric patients: A controlled planimetric study. Am J Psychiatry 140:453-456, 1983.

42. Rieder RO, Mann LS, **Weinberger DR**, vanKammen DP and Post RM: Computed tomography scans in patients with schizophrenia, schizoaffective disorder and bipolar affective disorder. Arch Gen Psychiatry 40:735-739, 1983.

43. Shore D, Potkin SG, **Weinberger DR**, Torrey EF, Henkin RJ, Agarwal RP, Gillin JC and Wyatt RJ: CSF copper in chronic schizophrenia. Am J Psychiatry 140:754-757, 1983.

44. Kaufmann CA, **Weinberger DR**, Yolken RH, Torrey EF and Potkin SG: CSF CMV antibodies in schizophrenia. Lancet ii:1136-1137, 1983.

45. Kleinman JE, Karson CN, **Weinberger DR**, Freed WJ, Berman KF and Wyatt RJ: Eye-blinking in chronic schizophrenic patients grouped by ventricular size. Am J Psychiatry 141:1430-1432, 1984.

46. **Weinberger DR**: Brain disease and psychiatric illness: When should a psychiatrist order a CAT scan? Am J Psychiatry 141:1521-1527, 1984.

47. Buchsbaum MS, DeLisi LE, Holcomb HH, Cappelletti J, King AC, Johnson J, Haslett E, Dowling-Zimerman S, Post RM, Morihisa JM, **Weinberger DR**, Margolin R and Kesaler RM: Anteroposterior gradients in cerebral glucose use in schizophrenia and affective disorders. Arch Gen Psychiatry 41:1159-1166, 1984.

48. **Weinberger DR**: Computed tomography (CT) findings in schizophrenia: Speculation on the meaning of it

all. J Psychiatric Res 18:477-490, 1984.

49. Kirch DG, Kaufmann CA, Papadopoulus NM, Martin B and **Weinberger DR**: Abnormal cerebrospinal protein indices in schizophrenia. Biol Psychiatry 20:1039-1046, 1985.

50. Kirch DG, Bigelow LB, **Weinberger DR**, Lawson **WB and Wyatt RJ**: Polydipsia and chronic hyponatremia in schizophrenic inpatients. J Clin Psychiatry 46:179-181, 1985.

51. **Weinberger DR**, Berman KF and Zec RF: Physiological dysfunction of dorsolateral prefrontal cortex in schizophrenia. I: Regional cerebral blood flow (rCBF) evidence. Arch Gen Psychiatry 43:114-125, 1986.

52. Berman KF, Zec RF and **Weinberger DR**: Physiological dysfunction of dorsolateral prefrontal cortex in schizophrenia. II: Role of medication, attention, and mental effort. Arch Gen Psychiatry 43:126-135, 1986.

53. Naber D, **Weinberger DR**, Bullinger M and Chase TN: Spasmodic torticollis: An investigation of symptomatology, course of illness, Family history and psychopathology. Der Nervenarzt 57:238-243, 1986.

54. Ludwig CL, **Weinberger DR**, Bruno G, Gillespie M, Bakker K, LeWitt PA and Chase TN: Buspirone, Parkinson's Disease and the locus ceruleus. J Clin Neuropharmacology 9:373-378, 1986.

55. Korpi ER, Kaufmann CA, Marnela K-M and **Weinberger DR**: Cerebrospinal fluid amino acid concentrations in chronic schizophrenia. Psychiatry Res 20:337-345, 1987.

56. Karson CN, Coppola R, Morihisa JM and **Weinberger DR**: Computerized EEG activity mapping in schizophrenia: The resting state reconsidered. Arch Gen Psychiatry 44:514-517, 1987.

57. **Weinberger DR**: Implications of normal brain development for the pathogenesis of schizophrenia. Arch Gen Psychiatry 44:660-669, 1987.

58. Jaffe MJ, Bruno G, Campbell G, Lavine R, Karson CN and **Weinberger DR**: Ganzfeld electroretinographic findings in Parkinsonism: Untreated patients and the effect of L-dopa intravenous infusion. J Neurol Neurosurg Psychiatry 50:847-852, 1987.

59. Berman KF, **Weinberger DR**, Shelton RC, Zec RF: A relationship between anatomical and physiological brain pathology in schizophrenia: Lateral cerebral ventricular size predicts cortical blood flow. Am J Psychiatry 144:1277-1282, 1987.

60. Raz S, Raz N, **Weinberger DR**, Boronow J, Pickar D, Bigler ED and Turkheimer EN: Morphological brain abnormalities in schizophrenia determined by computerized tomography: A reassessment based on volumetric quantification. Psychiatry Res 22:91-98, 1987.

61. Goldberg TE, **Weinberger DR**, Berman KF, Pliskin NH, Podd M: Further evidence for dementia of the pre-frontal type in schizophrenia. Arch Gen Psychiatry 44:1008-1014, 1987.

62. Rumsey JN, Berman KF, Denckler MBV, Hamburger SD, Kruesi MJ, **Weinberger DR**: Regional cerebral blood flow in severe developmental dyslexia. Arch Neurology 44:1144-1150, 1987.

63. Doran AR, Boronow J, **Weinberger DR**, Wolkowitz OM, Breier A, Pickar D: Structural brain pathology in schizophrenia revisited: Prefrontal cortex pathology is inversely correlated with CSF levels of homovanillic acid. Neuropsychopharmacology 1:25-32, 1987.

64. Myslobodsky MS, Ingraham LJ, **Weinberger DR**: Skull, asymmetry and handedness in adults: A

possibility of their association with lateral head turning in infancy. Perceptual Motor Skills 65:415-421, 1987.

65. Shelton RC, Doran AR, Pickar D and **Weinberger DR**: Cerebral structural pathology in schizophrenia: Evidence for a selective prefrontal cortical deficit. Am J Psychiatry 145;154-163, 1988.

66. Illowsky B, Juliano D, Bigelow LB, **Weinberger DR**: Stability of CT findings in schizophrenia: An eight year follow-up study. J Neurol Neurosurg Psychiatry 51:209-213, 1988.

67. **Weinberger DR**, Berman KF, Iadarola M, Driesen N, Zec RF: Prefrontal cortical blood flow and cognitive function in Huntington's Disease. J Neurol Neurosurg Psychiatry 51:94-104, 1988.

68. Naber D, **Weinberger DR**, Bullinger M, Polsby M and Chase TN: Personality variables, neurological and psychopathological symptoms in patients suffering from spasmodic torticollis. Compr Psychiatry 29:182-187, 1988.

69. Lawson WB, Waldman IN and **Weinberger DR**: Schizophrenic dementia: Clinical and CT correlates. J Nerv Ment Dis 176:207-212, 1988.

70. Kelsoe J, Cadet J-L, Pickar D, **Weinberger DR**: Quantitative neuroanatomy in schizophrenia: A controlled MRI study. Arch Gen Psychiatry 45:533-541, 1988.

71. Kaufmann CA, **Weinberger DR**, Stevens JR, Asher DM, Kleinman JE, Parisi JE, Langloss JM, Sulima MR, Gibbs CJ and Gadjusek DC: Intracerebral inoculation of experimental animals with brain tissue from patients with schizophrenia: Failure to observe consistent or specific behavioral and neuropathological effects. Arch Gen Psychiatry 45:648-652, 1988.

72. Goldberg T, Karson C, **Weinberger DR**: Intellectual impairment in adolescent psychosis: A Neuropsychological study. Schizophr Res 1:252-257, 1988.

73. **Weinberger DR**, Berman KF, Illowsky B: Physiological dysfunction of dorsolateral prefrontal cortex in schizophrenia: III. A new cohort and evidence for a monoaminergic mechanism. Arch Gen Psychiatry 45:609-615, 1988.

74. Berman KF, Illowsky B, **Weinberger DR**: Physiological dysfunction of dorsolateral prefrontal cortex in schizophrenia: IV. Further evidence for regional and behavioral specificity. Arch Gen Psychiatry 45:616-622, 1988.

75. Goldberg TE, Kleinman JE, Daniel DG, Myslobodsky MS, Ragland JR, **Weinberger DR**: Dementia praecox revisited: Age disorientation, mental status, and ventricular enlargement. Br J Psychiatry 153:187-190, 1988.

76. Kirch DG, Jaskiw G, Linnoila M, **Weinberger DR**, Wyatt RJ: Plasma amine metabolites before and after withdrawal from neuroleptic treatment in chronic schizophrenic inpatients. Psychiatry Res 25:233-242, 1988.

77. Goldberg TE, Kelsoe JR, **Weinberger DR**, Pliskin NH, Kirwin PD, Berman KF: Performance of schizophrenic patients on putative neuropsychological tests of frontal lobe function. Int J Neurosci 42:51-58, 1988.

78. Suddath RL, Casanova M, Goldberg T, Daniel D, Kelsoe J, **Weinberger DR**: Temporal lobe pathology in schizophrenia: A quantitative MRI study. Am J Psychiatry 146:464-472, 1989

79. DeLisi LE, Buchsbaum MS, Holcomb HH, Langston KG, King AC, Kessler R, Pickar D, Carpenter W, Morihisa JM, Margolin R and **Weinberger DR**: Increased temporal lobe glucose use in chronic schizophrenic patients. Biol Psychiatry 25:835-851, 1989.

80. Zohar J, Insel TR, Berman KF, Foa EB, Hill JL, **Weinberger DR**: Anxiety and cerebral blood flow during behavioral challenge: Dissociation of central from peripheral and subjective measures. Arch Gen Psychiatry 46:505-510, 1989.

81. Goldberg TE, **Weinberger DR**, Pliskin NH, Berman KF, Podd M: Recall memory deficit in schizophrenia: A possible manifestation of frontal lobe dysfunction. Schizophr Res 2:251-257, 1989.

82. Daniel DG, Berman KF, **Weinberger DR**: The effect of apomorphine on regional cerebral blood flow in schizophrenia. J Neuropsych Clin Neurosci 1:377-384, 1989.

83. Christison GW, Casanova MF, **Weinberger DR**, Rawlings R, Kleinman JE: A quantitative investigation of hippocampal pyramidal cell size, shape and variability of orientation in schizophrenia. Arch Gen Psychiatry 46:1027-1032, 1989.

84. Casanova MF, Daniel DG, Goldberg TE, Suddath RL, **Weinberger DR**: Shape analysis of the middle cranial fossa of schizophrenic patients: A computerized tomographic study. Schizophr Res 2:333-338, 1989.

85. Myslobodsky MS, Coppola R, Bar-Ziv J, Karson C, Daniel DG, van Praag H, **Weinberger DR**: EEG asymmetries may be affected by cranial and brain asymmetries. Brain Topogr 1:221-229, 1989.

86. Casanova MF, Prasad CM, Walderman I, Karp B, Stein B, **Weinberger DR**, Kleinman JE: No difference in basal ganglia mineralization between schizophrenic and nonschizophrenic patients: A quantitative computerized tomographic study. Biol Psychiatry 27:138-142, 1990.

87. Daniel DG, Myslobodsky MS, Coppola R, **Weinberger DR**: The relationship of occipital skull asymmetry to brain parenchymal measures in schizophrenia. Schizophr Res 2:465-472, 1990.

88. Berman KF, **Weinberger DR**: Lateralization of cortical function during cognition: Studies in normals and patients with schizophrenia. J Neurol Neurosurg Psychiatry 53:150-160, 1990.

89. Goldberg TE, Berman KF, Moore E, **Weinberger DR**: rCBF and cognition in Huntington's disease and schizophrenia: A comparison of patients matched for performance on a prefrontal-type task. Arch Neurol 47:418-422, 1990.

90. Suddath RL, Christison GW, Torrey EF, Casanova MF, **Weinberger DR**: Anatomical abnormalities in the brains of monozygotic twins discordant for schizophrenia. N Engl J Med 322:789-794, 1990.

91. Goldberg TE, St.-Cyr JA, **Weinberger DR**: Assessment of procedural learning and problem solving in schizophrenic patients by tower of Hanoi type tasks. J Neuropsych Clin Neurosci 2:165-173, 1990.

92. Casanova MF, Sanders RD, Goldberg TE, Bigelow LB, Christison G, Torrey EF, **Weinberger DR**: Morphometry of the corpus callosum in monozygotic twins discordant for schizophrenia: A magnetic resonance imaging study. J Neurol Neurosurg Psychiatry 53:416-421, 1990.

93. Jaskiw GE, **Weinberger DR**: Ibotenic acid lesions of the medial prefrontal cortex potentiate FG-7142-induced attenuation of exploratory activity in the rat. Pharmacol Biochem Behav 36:695-697, 1990.

94. Myslobodsky MS, Coppola R, Bar-Ziv J, **Weinberger DR**: Adequacy of the International 10-20 electrode system for computed neurophysiologic topography. J Clin Neurophysiol 7(4):507-518, 1990.

95 Casanova MF, Goldberg TE, Suddath RL, Daniel DG, Rawlings R, Lloyd DG, Loats HL, Kleinman JE, **Weinberger DR**: Quantitative shape analysis of the temporal and prefrontal lobes of schizophrenic patients: a magnetic resonance image study. J Neuropsychiatry Clin Neurosci 2:363-372, 1990.

96. Myslobodsky MS, Coppola R, Bar-Ziv J, **Weinberger DR**: Anatomical brain imaging as a guide for electrode placements: Towards a CT/MRI assisted electroencephalography. J Clin Neurophysiol 1:221-229, 1990.

97. Goldberg TE, Ragland JD, Gold J, Bigelow LB, Torrey EF, **Weinberger DR**: Neuropsychological assessment of monozygotic twins discordant for schizophrenia. Arch Gen Psychiatry 47:1066-1072, 1990.

98. Jaskiw GE, Karoum F, **Weinberger DR**: Persistent elevations of dopamine and metabolites in nucleus accumbens after subchronic, mild stress in rats with ibotenic acid lesions of medial prefrontal cortex. Brain Res 534:321-323, 1990.

99. Jaskiw GE, Karoum F, Freed WJ, Kleinman JE, **Weinberger DR**: Effect of ibotenic acid lesions of the medial prefrontal cortex on brain concentrations of dopamine metabolites in the rat. Brain Res 534:263-272, 1990.

100. Schapiro MB, Berman KF, Friedland RP, **Weinberger DR**, Rapoport SI: Regional cerebral blood flow is not decreased in young adult Down Syndrome. Brain Dysfunction 2:310-315, 1990.

101. Goldberg TE, Bigelow LB, **Weinberger DR** , Daniel DG, Kleinman JE: Cognitive and behavioral effects of the coadministration of dextroamphetamine and haloperidol in schizophrenia. Am J Psychiatry 148:78-84, 1991.

102. **Weinberger DR**, Gibson R, Coppola R, Jones DW, Sunderland P, Berman KF, Reba RC: The distribution of cerebral muscarinic acetylcholine receptors in vivo in patients with dementia: A controlled study with 123-IQNB and SPECT. Arch Neurol 48:169-176, 1991.

103. Casanova MF, Naidu S, Goldberg TE, Moser HW, Khoromi S, Kumar A, Kleinman JE and **Weinberger DR**: Quantitative magnetic resonance imaging in Rhett Syndrome. J Neuropsych Clin Neurosci 3:66-72, 1991.

104. Daniel DG, Kim E, Kostianovsky D, Goldberg TE, Casanova M, Pickar D, Kleinman JE, **Weinberger DR**: Computed tomography measurements of brain density in schizophrenia. Biol Psychiatry 29:745-756, 1991.

105. Jaskiw GE, Weinberger, DR, Crawley JN: Microinjection of apomorphine into the prefrontal cortex of the rat reduces dopamine metabolite concentrations in microdialysate from the caudate nucleus. Biol Psychiatry 29:703-706, 1991.

106. Myslobodsky MS, Coppola R, **Weinberger DR**: EEG laterality in the era of structural brain imaging. Brain Topography 3:381-390, 1991.

107. Daniel DG, **Weinberger DR**, Goldberg TE, Coppola R, Jones DW, Bigelow LB, Berman KF, Kleinman JE: The effect of amphetamine on regional cerebral blood flow during cognitive activation in schizophrenia. J Neurosci 11:1907-1917, 1991.

108. Myslobodsky MS, Glicksohn J, Coppola R, **Weinberger DR**: Occipital lobe morphology in normal individuals assessed by magnetic resonance imaging (MRI). Vision Res 31:1677-1685, 1991.

109. Lipska BK, Jaskiw GE, Karoum F, Phillips I, Kleinman JE, **Weinberger DR**: The effect of amphetamine

on regional cerebral blood flow during cognitive activation in schizophrenia. Pharm Biochem Behav 40:181-184, 1991.

110. Lipska BK, Jaskiw GE, **Weinberger DR**: Dorsal hippocampal lesion abolishes the response to FG-7142 in the rat. Pharm Biochem Behav 40:169-172, 1991.

111. Daniel DG, Goldberg TE, **Weinberger DR**: Lack of a bimodal distribution of ventricular size in patients with schizophrenia. Biol Psychiatry 30:887-903, 1991.

112. Laruelle M, Sidhu A, Casanova MF, **Weinberger DR**, Kleinman JE: Characterization of [^{125}I]SCH23982 binding in human brain: Comparison with [^{3}H]SCH23390. Neurosci Lett 131:273-276, 1991.

113. Naber D, **Weinberger DR**, Gillespie M, Chase TN: Failure of Buspirone and Verapamil to improve spasmodic torticollis. J Neuropsychiatry Clin Neurosci 4:82-84, 1992.

114. Hyde TM, Aaronson BA, Randolph C, Rickler KC, **Weinberger DR**: The relationship of birth weight to the phenotypic expression of Tourettes Syndrome in monozygotic twins. Neurology 42:652-658, 1992.

115. Myslobodsky MS, Goldberg **TE, Weinberger DR**: Lipreading in patients with schizophrenia. J Nerv Ment Dis 180:168-171, 1992.

116. Hyde TM, Ziegler JC, **Weinberger DR**: Psychiatric disturbances in metachromatic leukodystrophy: Insight into the neurobiology of psychosis. Arch Neurology 49:401-406, 1992.

117. Jaskiw GE, **Weinberger DR**: Ibotenic acid lesion of the medial prefrontal cortex potentiates swim stress induced increase in locomotor activity. Pharm Biochem Behav 41:607-609, 1992.

118. Laruelle M, Jaskiw GE, Lipska BK, Kolachana BS, Casanova MF, Kleinman JE, **Weinberger DR**: D1 and D2 receptor modulation in striatum and nucleus accumbens of rats after subchronic and chronic haloperidol treatment. Brain Res 575:47-56, 1992.

119. **Weinberger DR**, Berman KF, Suddath R, Torrey EF: Evidence for dysfunction of a prefrontal-limbic network in schizophrenia: An MRI and rCBF study of discordant monozygotic twins. Am J Psychiatry 149:890-897, 1992.

120. Jolkkonen J, Pitkanen A, Riekkinen PJ, Korpi ER, Kaufmann CA, **Weinberger DR**: Somatostatin-like immunoreactivity in CSF of schizophrenic patients during haloperidol treatment. Biol Psychiatry 31:962-964, 1992.

121. **Weinberger DR**, Jones D, Mann U, Coppola R, Gibson R, Gorey J, Braun AR, Reba RC, Chase TN: A comparison of FDG PET and IQNB SPECT in normal subjects and in patients with dementia. J Neuropsychiatry Clin Neurosci 4:239-248, 1992.

122. Gold J, Randolph C, Goldberg TE, **Weinberger DR**: Forms of memory failure in schizophrenia. J Abnorm Psychology 101:487-494, 1992.

123. Lipska BK, Jaskiw GE, Karoum F, Chrapusta S, Weinberger, DR: Ibotenic acid lesion of the ventral hippocampus differentially affects dopamine and its metabolites in the nucleus accumbens and prefrontal cortex in the rat. Brain Res 585:1-6, 1992.

124. Ragland JD, Goldberg TE, Wexler BE, Gold JM, Torrey EF, **Weinberger DR**: Dichotic listening in monozygotic twins discordant and concordant for schizophrenia. Schizophr Res 7:177-183, 1992.

125. Egan MF, Hyde TM, Tirschwell DL, Kleinman JE, **Weinberger DR**: Laterality of appendicular tardive dyskinesia in chronic schizophrenia. Biol Psychiatry 31:1098-1109, 1992.

126. Gold JM, Randolph C, Coppola R, Carpenter C, Goldberg T, **Weinberger DR**: Visual orienting in schizophrenia. Schizophr Res 7:203-209, 1992.

127. Illowsky-Karp B, Juliano D, Berman KF, **Weinberger DR**: Neurologic outcome of patients with dorsolateral prefrontal leucotomy. J Neuropsychiatry Clin Neurosci 4:415-421, 1992.

128. Lipska BK, Jaskiw, GE, Arya A, **Weinberger DR**: Serotonin depletion by intraventricular injection of 5,7-dihydroxytryptamine causes long-term reduction of exploration in the rat. Pharm Biochem Behav 43:1247-1252, 1992.

129. Berman KF, Torrey EF, Daniel DG, **Weinberger DR**: Regional cerebral blood flow in monozygotic twins discordant and concordant for schizophrenia. Arch Gen Psychiatry 49:927-934, 1992.

130. Gold JM, Randolph C, Carpenter CJ, Goldberg TE, **Weinberger DR**: The performance of patients with schizophrenia on the Wechsler Memory Scale. Clin Neuropsychol 6:367-373, 1992.

131. Coppola R, Marenco S, Jones DW, **Weinberger DR**: A comparison of Xenon-133 and Xenon-127 for the determination of regional cerebral blood flow measured by dynamic SPECT. Psychiatry Res: Neuroimaging 45:187-200, 1992.

132. Gold JM, Goldberg TE, **Weinberger DR**: Prefrontal function and schizophrenic symptoms. Neuropsychiatry Neuropsychol Behav Neurol 5:253-261, 1992.

133. Randolph C, Gold JM, Carpenter CJ, Goldberg TE, **Weinberger DR**: Release from proactive interference: Determinants of performance and neuropsychological correlates. J Clin Exp Neuropsychol 14:785-800, 1992

134. Abi-Dargham A, Lareulle M, Wong DT, Robertson DW, **Weinberger DR**, Kleinman JE: Pharmacological and regional characterization of [3H]LY278584 binding sites in human brain. J Neurochem 60:730-737, 1992.

135. Goldberg TE, Greenberg R, Griffin S, Gold JM, Pickar D, Kleinman JE, **Weinberger DR**: The impact of clozapine on cognitive impairment and psychiatric symptomatology in patients with schizophrenia. Br J Psychiatry 162:43-48, 1993.

136. Zigun JR, Frank JA, Barrios FA, Jones DW, Foo T, Moonen TW, Press DZ, **Weinberger DR**: Measurement of brain activity during visual stimulation using MRI. Radiology 186:353-356, 1993.

137. Berman KF, Doran AR, Pickar D, **Weinberger DR**: Is the mechanism of prefrontal hypometabolism in depression the same as in schizophrenia? Br J Psychiatry 162:183-192, 1993.

138. Goldberg TE, Torrey EF, Gold J, Ragland D, Bigelow LB, **Weinberger DR**: Learning and memory in monozygotic twins discordant for schizophrenia. Psychol Med 23:71-85, 1993.

139. He X-S, Bowen WD, Lee KS, Williams W, **Weinberger DR**, de Costa BR: Synthesis and binding characteristics of potential SPECT imaging agents for σ-1 and σ-2 binding sites. J Med Chem 36:566-572, 1993.

140. Hyde TM, Fitzcharles EK, **Weinberger DR**: Age-related prognostic factors in the severity of illness of Tourette's syndrome in monozygotic twins. J Neuropsych Clin Neurosci 5:178-182, 1993.

141. Kulynych JJ, Vladar K, Jones DW, **Weinberger DR**: Application of three-dimensional surface renderings to MRI morphometry: A study of the planum temporale. J Comput Assist Tomogr 17:529-535, 1993.

142. **Weinberger DR**: A Connectionist Approach to the Prefrontal Cortex. J Neuropsych Clin Neurosci 5:241-253, 1993.

143. Lipska BK, Jaskiw GE, **Weinberger DR**: Postpubertal emergence of augmented exploration and amphetamine supersensitivity after neonatal differentiation of the rat ventral hippocampus: A potential animal model of schizophrenia. Neuropsychopharmacology 9(1):67-75, 1993.

144. He X, Lee KS, **Weinberger DR**, de Costa BR: Synthesis of a novel 123I-labelled derivative of GBR12783, a potential agent for SPECT imaging of dopamine-reuptake sites. J Labelled Comp Radiopharm 6:493-500, 1993.

145. Abi-Dargham A, Laruelle M, Lipska B, Jaskiw GE, Wong DT, Robertson DW, **Weinberger DR**, Kleinman JE: Serotonin 5-HT-3 receptors in schizophrenia: A postmortem study of amygdala. Brain Res 616:53-57, 1993.

146. Goldberg TE, Gold JM, Greenberg R, Griffin S, Schulz SC, Pickar D, Kleinman JE, **Weinberger DR**: Contrasts between patients with affective disorder and patients with schizophrenia on a neuropsychological screening battery. Am J Psychiatry 150:1355-1362, 1993.

147. Laruelle M, Toti R, Abi-Dargham A, Casanova MF, **Weinberger DR**, Kleinman JE: Selective abnormalities of prefrontal serotonergic receptors in schizophrenia: A postmortem study. Arch Gen Psychiatry 50:810-818, 1993.

148. Marenco S, Coppola R, Daniel DG, Zigun JR, **Weinberger DR**: Regional cerebral blood flow activation with the Wisconsin Card Sort Test in normal subjects studied by Xe-133 dynamic SPECT: Comparison of absolute values, percent distribution values, and covariance analysis. Psych Res: Neuroimaging 50:177-192, 1993.

149. Lipska BK, **Weinberger DR**: Delayed effects of neonatal hippocampal damage on haloperidol-induced catalepsy and apomorphine-induced stereotypic behaviors in the rat. Dev Brain Res 75:213-222, 1993.

150. Braun AR, Jaskiw GE, Sexton RH, Vladar K, Kolachana BS, **Weinberger DR**: Effects of ibotenic acid lesion of medial prefrontal cortex on dopamine agonist-induced behaviors in the rat. Pharmacol Biochem Behav 46:51-60, 1993.

151. Randolph C, Hyde TM, Gold JM, Goldberg TE, **Weinberger DR**: Tourette's Syndrome in monozygotic twins: Relationship of tic severity to neuropsychological function. Arch Neurol 50:725-728, 1993.

152. Bartley AJ, Jones DW, Torrey EF, Zigun JR, **Weinberger DR**: Sylvian fissure asymmetries in monozygotic twins: A test of laterality in schizophrenia. Biol Psychiatry 34:853-863, 1993.

153. Randolph C, Gold JM, Carpenter C, Goldberg TE, **Weinberger DR**: Implicit memory in patients with schizophrenia and normal controls: Effects of task demands on susceptibility to priming. J Clin Exp Neuropsych 15:853-866, 1993.

154. Casanova MF, Carosella NW, Gold J, Powers RE, **Weinberger DR**, Kleinman JE: A topographical study of senile plaques and neurofibrillary tangles in the hippocampi of Alzheimer's disease and cognitively impaired schizophrenic patients. Psychiatry Res 49:41-62, 1993.

155. Wolf SS, Hyde TM, **Weinberger DR**: Malformations of the septum pellucidum: Two cases in association with schizophrenia. J Psychiatry Neurosci 19:140-144, 1994.

156. Goldberg TE, **Weinberger DR**: Schizophrenia, training paradigms and the Wisconsin Card Sort Test redux. Schizophr Res 11:291-296, 1994.

157. Marsh L, Suddath RL, Higgins N, **Weinberger DR**: Medial temporal structures in schizophrenia: Lack of correlation between size reduction and normal age-related changes. Schizophr Res 11:225-238, 1994.

158. Roy BF, Chawki B, Hill JL, Pierce PF, Dauphin MM, Kelly TM, Sunderland T, **Weinberger DR**, Breslin N: Serum antibody for somatostatin-14 and prodynorphin 209-240 in patients with obsessive-compulsive disorder, schizophrenia, Alzheimer's Disease and Multiple Sclerosis and advanced HIV infection. Biol Psychiatry 35:335-344, 1994.

159. Gold JM, Hermann BP, Randolph C, Wyler AR, Goldberg TE, **Weinberger DR**: Schizophrenia and temporal lobe epilepsy: A neuropsychological analysis. Arch Gen Psychiatry 51:265-272, 1994.

160. Kulynych JJ, Vladar K, Jones DW, **Weinberger DR**: Gender differences in the normal lateralization of the supratemporal cortex: MRI surface-rendering morphometry of Heschl's gyrus and the planum temporale. Cerebral Cortex 4:107-118, 1994.

161. Hyde TM, Nawroz S, Goldberg TE, Strong D, Ostrem JL, **Weinberger DR**, Kleinman JE: Is there cognitive decline in schizophrenia? Insights from a cross-sectional study. Br J Psychiatry 164:494-500, 1994.

162. Breslin NA, Suddath RL, Bissette G, Nemeroff CB, Lowrimore P, **Weinberger DR**: CSF concentrations of neurotensin in schizophrenia: An investigation of clinical and biochemical correlates. Schizophr Res 12:35-41, 1994.

163. Saunders RC, Kolachana BS, **Weinberger DR**: Local pharmacological manipulation of extracellular dopamine levels in the dorsolateral prefrontal cortex and caudate nucleus in the rhesus monkey: An in vivo microdialysis study. Exp Brain Res 98:44-52, 1994.

164. Moonen CTW, Barrios FA, Zigun JR, Gillen J, Liu G, Sobering G, Sexton R, Woo J, Frank J, **Weinberger DR**: Functional brain MR imaging based on bolus tracking with a fast T_2-sensitized gradient-echo method. Magn Reson Imaging 12:379-385, 1994.

165. Goldberg TE, Torrey EF, Berman KF, **Weinberger DR**: Relations between neuropsychological performance and brain morphological and physiological measures in monozygotic twins discordant for schizophrenia. Psychiatry Res: Neuroimaging 55:51-61, 1994.

166. Lipska BK, **Weinberger DR**: Gonadectomy does not prevent novelty or drug-induced motor hyperresponsiveness in rats with neonatal hippocampal damage. Dev Brain Res 78:253-258, 1994.

167. Lipska BK, Jaskiw GE, **Weinberger DR**: The effects of combined prefrontal cortical and hippocampal damage on dopamine-related behaviors in rats. Pharm Biochem Behav 48:1053-1057, 1994.

168. Lipska BK, **Weinberger DR**: Subchronic treatment with haloperidol or clozapine in rats with neonatal excitotoxic hippocampal damage. Neuropsychopharmacology 10:199-205, 1994.

169. Frank JA, Mattay VS, Duyn J, Sobering G, Barrios FA, Zigun J, Sexton R, Kwok P, Woo J, Moonen C, **Weinberger DR**: Measurement of relative cerebral blood volume (rCBV) changes with visual stimulation by "double-dose" gadopentetate dimeglumine enhanced dynamic MRI. Invest Radiol 29:S157-S160, 1994.

170. Hyde TM, Emsellem HL, Randolph C, Rickler KC, **Weinberger DR**: EEG Abnormalities in Monozygotic Twins with Tourette's Syndrome. Br J Psychiatry 164:811-817, 1994.

171. Wolf SS, Moody TW, Saunders RC, Kleinman JE, **Weinberger DR**, Hyde TM: Autoradiographic characterization of 125I-neurotensin binding sites in human entorhinal cortex. Brain Res Bull 35:353-358, 1994.

172. Duyn JH, Mattay VS, Sexton RH, Sobering GS, Barrios FA, Liu G, Frank JA, **Weinberger DR**, Moonen CTW: 3-dimensional functional imaging of human brain using echo-shifted FLASH MRI. Magn Reson Med 32:150-155, 1994.

173. Jaskiw GE, Juliano DM, Goldberg TE, Hertzman M, Urow-Hamell E, **Weinberger DR**: Cerebral ventricular enlargement in schizophreniform disorder does not progress - A seven year follow-up study. Schizophr Res 14:23-28, 1994.

174. Kolachana BS, Saunders RC, **Weinberger DR**: An improved methodology for routine *in vivo* microdialysis in nonhuman primates. J Neuorsci Methods 55:1-6, 1994.

175. Egan ME, Hyde TM, **Weinberger DR**, Kleinman JE, Wyatt RJ: Alterations in mRNA levels of D2 receptors and neuropeptides in striatonigral and striatopallidal neurons of rats with neuroleptic-induced dyskinesias. Synapse 18:178-189, 1994.

176. Hitri A, Casanova MF, Kleinman JE, **Weinberger DR**, Wyatt RJ: Age-related changes in [3H]GBR 12935 binding site density in the prefrontal cortex of controls and schizophrenics. Biol Psychiatry 37:175-182, 1995.

177. Hyde TM, **Weinberger DR**: Tourette syndrome: A model neuropsychiatric disorder. JAMA 273:498-501, 1995.

178. Mattay VS, **Weinberger DR**, Barrios FA, Duyn JH, Kotrla KJ, Sobering GS, Sexton RH, Moonen CTW, Frank JA: Brain mapping using functional MRI: A direct comparison of gradient echo based dynamic contrast and "bold" methods. Radiology 194:687-691, 1995.

179. Murray AM, Hyde TM, Knable MB, Herman MM, Bigelow LB, Carter J, **Weinberger DR**, Kleinman JE: Distribution of putative D4 dopamine receptors in postmortem striatum from patients with schizophrenia. J Neurosci 15:2186-2191, 1995.

180. Lipska BK, Chrapusta SJ, Egan MF, **Weinberger DR**: Neonatal excitotoxic ventral hippocampal damage alters dopamine response to mild repeated stress and to chronic haloperidol. Synapse 20:125-130, 1995.

181. Hyde TM, Stacey ME, Coppola R, Handel SF, Rickler KC, **Weinberger DR**: Cerebral morphometric abnormalities in Tourette's Syndrome: A quantitative MRI study of monozygotic twins. Neurology 45:1176-1182, 1995.

182. Kulynych JJ, Vladar K, Fantie BD, Jones DW, **Weinberger DR**: Normal asymmetry of the planum temporale in patients with schizophrenia: Three-dimensional cortical morphometry with MRI. Br J Psychiatry 166:742-749, 1995.

183. Knable MB, Jones DW, Coppola R, Hyde TM, Lee KS, Gorey J, **Weinberger DR**: Lateralized differences in Iodine-123-IBZM uptake in the basal ganglia in asymmetric Parkinson's disease. J Nucl Med 36:1216-1225, 1995.

184. van Gelderen P, Ramsey NF, Liu G, Duyn JH, Frank JA, **Weinberger DR**, Moonen CTW: Three dimensional functional MRI of human brain on a clinical 1.5T scanner. Proc Nat Acad Sci (USA) 92:6906-6910, 1995.

185. Coppola R, Myslobodsky M, **Weinberger DR**: Midline abnormalities and psychopathology: How reliable is the midsagittal MR 'window' in the brain? Psychiatry Res; Neuroimaging 61:33-42, 1995.

186. **Weinberger DR**, Lipska BK: Cortical maldevelopment, anti-psychotic drugs, and schizophrenia: A search for common ground. Schizophr Res 16:87-110, 1995.

187. Lipska BK, **Weinberger DR**: Genetic variation in vulnerability to the behavioral effects of neonatal hippocampal damage in the rat. Proc Nat Acad Sci (USA) 92:8906-8910, 1995.

188. Berman KF, Randolph C, Gold J, Goldberg TE, Coppola R, Ostrem JL, Carson RE, Herscovitch P, **Weinberger DR**: Physiological activation of a cortical network during performance of the Wisconsin Card Sorting Test: A Positron Emission Tomography study. Neuropsychologia 33:1027-1046, 1995.

189. Gold JM, Blaxton TA, Hermann B, Randolph C, Fedio P, Goldberg TE, Theodore WH, **Weinberger DR**: Memory and intelligence in lateralized temporal lobe epilepsy and schizophrenia. Schizophr Res 17:59-65, 1995.

190. Goldberg TE, Torrey EF, Gold JM, Bigelow LB, Ragland RD, Taylor E, **Weinberger DR**: Genetic risk of neuropsychological impairment in schizophrenia: A study of monozygotic twins discordant and concordant for the disorder. Schizophr Res 17:77-84, 1995.

191. Lipska BK, Jaskiw GE, Braun AR, **Weinberger DR**: Prefrontal cortical and hippocampal modulation of haloperidol-induced catalepsy and apomorphine-induced stereotypic behaviors in the rat. Biol Psychiatry 38:255-262, 1995.

192. **Weinberger DR**: Schizophrenia: From neuropathology to neurodevelopment. Lancet 346:552-557, 1995.

193. Kolachana BS, Saunders RC, **Weinberger DR**: Augmentation of prefrontal cortical dopaminergic activity inhibits catecholamine release in the caudate: An *in vivo* neurochemical assessment in the rhesus monkey. Neuroscience 69:859-868, 1995.

194. Wolf SS, Hyde TM, Saunders RC, Herman MM, **Weinberger DR**, Kleinman JE: Autoradiographic characterization of neurotensin receptors in the entorhinal cortex of schizophrenic patients and control subjects. J Neural Transm 102:55-65, 1995.

195. Swerdlow NR, Lipska BK, **Weinberger DR**, Braff DL, Jaskiw GE, Geyer MA: Increased sensitivity to the sensorimotor gating-disruptive effects of apomorphine after lesions of medial prefrontal cortex or ventral hippocampus in adult rats. Psychopharmacology 122:27-34, 1995.

196. Lipska BK, Swerdlow NR, Geyer MA, Jaskiw GE, Braff DL, **Weinberger DR**: Neonatal excitotoxic hippocampal damage in rats causes postpubertal changes in prepulse inhibition of startle and its disruption by apomorphine. Psychopharmacology 122:35-43, 1995.

197. Sunderland T, Esposito G, Molchan SE, Coppola R, Jones DW, Gorey J, Little JT, Cantillon M, Bahro M, **Weinberger DR**: Differential cholinergic regulation in Alzheimer's patients compared to controls following chronic blockade with scopolamine: A SPECT study. Psychopharmacology 121:231-241, 1995.

198. Hyde TM, Egan MF, Wing LL, Wyatt RJ, **Weinberger DR**, Kleinman JE: Persistent catalepsy predicts the development of severe dyskinesias in rats treated with chronic injections of haloperidol decanoate.

Psychopharmacology 118:142-149, 1995.

199. Hyde TM, Egan MF, Brown RJ, **Weinberger DR**, Kleinman JE: Diurnal variation in Tardive Dyskinesia. Psychiatry Res 56:53-57, 1995.

200. Goldberg TE, Torrey EF, Gold JM, **Weinberger DR**: Lack of sex differences in the neuropsychological performance of patients with schizophrenia. Am J Psychiatry 152:883-888, 1995.

201. Duyn JH, Ramsey NR, Mattay VS, van Gelderen P, Moonen CTW, Sexton RH, Tallent KA, **Weinberger DR**, Frank JA: Effects of large vessels in functional magnetic resonance imaging at 1.5 Tesla. Int J Imaging Sys Technol 6:245-252, 1995.

202. Fleming K, Goldberg TE, Gold JM, **Weinberger DR**: Verbal working memory dysfunction in schizophrenia: Use of a Brown-Peterson paradigm. Psychiatry Res 56:155-161, 1995.

203. Gold JM, Berman KF, Randolph C, Goldberg TE, **Weinberger DR**: PET validation and clinical application of a novel prefrontal task. Neuropsychology 10:3-10, 1996.

204. Kulynych JJ, Vladar K, Jones DW, **Weinberger DR**: Superior temporal gyrus volume in schizophrenia: A study using MRI morphometry assisted by surface rendering. Am J Psychiatry 153:50-56, 1996.

205. Daniel DG, Goldberg TE, **Weinberger DR**, Kleinman JE, Pickar D, Lubick LJ, Williams TS: Different side effect profiles of risperidone and clozapine in 20 outpatients with schizophrenia or schizoaffective disorder: A pilot study. Am J Psychiatry 153:417-419, 1996.

206. Van Horn JD, Berman KF, **Weinberger DR**: Functional lateralization of the prefrontal cortex during traditional frontal lobe tasks. Biol Psychiatry 39:389-399, 1996.

207. Esposito G, Van Horn JD, **Weinberger DR**, Berman KF: Gender differences in cerebral blood flow with PET: Is there an effect of cognitive state? J Nucl Med 37:559-564, 1996.

208. Goldberg TE, Randolph C, Berman KF, Gold JM, **Weinberger DR**: Isolating the mnemonic component in spatial delayed response in normal humans: A controlled PET oxygen-15 water cerebral flow study. Neuroimage 3:69-78, 1996.

209. Mattay VS, Berman KF, Ostrem JL, Esposito G, Van Horn JD, Bigelow LB, **Weinberger DR**: Dextroamphetamine enhances "neural network specific" physiological signals: A PET rCBF study. J Neurosci 16:4816-4822, 1996.

210. Kirkby BS, Van Horn JD, Ostrem JL, **Weinberger DR**, Berman KF: A PET study of functional reorganization following closed head injury: A case study of monozygotic twins. Neuropsychologia 34:689-697, 1996.

211. Mattay VS, Frank JA, Duyn JH, Kotrla KJ, Santha AKS, Esposito G, Sexton RH, Barker P, Sunderland T, Moonen CTW, **Weinberger DR**: 3D 'BURST' fMRI: Initial clinical applications. Acad Radiology 3:S379-S383, 1996.

212. Wolf SS, Jones DW, Knable MB, Gorey J, Lee KS, Hyde TM, Coppola R, **Weinberger DR**: Tourette's Syndrome: Prediction of phenotypic variation in monozygotic twins by caudate nucleus D2 receptor binding. Science 273:1225-1227, 1996.

213. Ramsey NF, Kirkby BS, Van Gelderen P, Berman KF, Duyn JH, Frank JA, Mattay VS, Van Horn JD, Esposito G, Moonen CTW, **Weinberger DR**: Functional mapping of human sensorimotor cortex with 3D

BOLD fMRI correlates highly with H215O PET rCBF. J Cereb Blood Flow Metab 16:755-764, 1996.

214. Lillrank SM, Lipska BK, Bachus SE, Wood GK, **Weinberger DR**: Amphetamine induced c-fos mRNA expression is altered in rats with neonatal ventral hippocampal damage. Synapse 23:292-301, 1996.

215. Yang Y, Glover GH, van Gelderen P, Mattay VS, Santha AKS, Ramsey NF, Moonen CTW, **Weinberger DR**, Frank JA, Duyn JH: Fast 3D functional magnetic resonance imaging at 1.5 T with spiral acquisition. Magn Reson Med 36:620-626, 1996.

216. Ramsey NF, Tallent K, van Gelderen P, Frank JA, Moonen CTW, **Weinberger DR**: Reproducibility of human 3D fMRI brain maps acquired during a motor task. Hum Brain Map 4:113-121, 1996.

217. Noga JT, Bartley A, Jones DW, Torrey EF, **Weinberger DR**: Cortical gyral anatomy and gross brain dimensions in monozygotic twins discordant for schizophrenia. Schizophr Res 22:27-40, 1996.

218. Mattay VS, Frank JA, Santha AKS, Pekar JJ, McLaughlin AC, **Weinberger DR**: Whole brain functional mapping with MRI. Radiology 201:399-404, 1996.

219. Bertolino A, Nawroz S, Mattay VS, Barnett AS, Duyn JH, Moonen CTW, Frank JA, Tedeschi G, **Weinberger DR**: Regionally specific pattern of neurochemical pathology in schizophrenia as assessed by multislice proton magnetic resonance spectroscopic imaging. Am J Psychiatry 153:1554-1563, 1996.

220. Pickar D, Su T-P, **Weinberger DR**, Coppola R, Malhotra AK, Knable MB, Lee KS, Gorey J, Breier A, Hsiao J: Individual variation in D2 occupancy in clozapine treated patients. Am J Psychiatry 153:1571-1578, 1996.

221. Lee KS, He X-S, Jones DW, Coppola R, Gorey JG, Knable MB, deCosta BR, Rice KC and **Weinberger DR**: An improved method for rapid and efficient radioiodination of iodine-123-IQNB. J Nucl Med 37:2021-2024, 1996.

222. Ye FQ, Mattay VS, Jezzard P, Frank JA, **Weinberger DR**, McLaughlin AC: Correction for vascular artifacts in cerebral blood flow values measured using arterial spin tagging techniques. Magn Reson Med 37:226-235, 1997.

223. Gold JM, Carpenter C, Randolph C, Goldberg TE, **Weinberger DR**: Auditory working memory and the Wisconsin Card Sorting Test. Arch Gen Psychiatry 54:159-165, 1997.

224. Heinz A, Jones DW, Knable MB, Gorey JG, Lee KS, Saunders RC, **Weinberger DR**: Analysis of the metabolites of [I-123]ß-CIT in Plasma of Human and Non-human Primates. Synapse 25:306-308, 1997.

225. Kolachana BS, Saunders RC, **Weinberger DR**: *In vivo* characterization of extracellular GABA release in the caudate nucleus and prefrontal cortex of the rhesus monkey. Synapse 25:285-292, 1997.

226. Bartley AJ, Jones DW, **Weinberger DR**: Genetic variability of human brain size and cortical gyral patterns. Brain 120:257-269, 1997.

227. Breier A, Su T-P, Saunders R, Carson RE, Kolachana BS, de Bartolomeis A, **Weinberger DR**, Weisenfeld N, Malhotra AK, Eckelman WC, Pickar D: Schizophrenia is associated with elevated amphetamine-induced synaptic dopamine concentrations: Evidence from a novel positron emission tomography method. Proc Nat Acad Sci (USA) 94:2569-2574, 1997.

228. Kulynych JJ, Luevano LF, Jones DW, **Weinberger DR**: Cortical abnormality in schizophrenia: An in vivo application of the gyrification index. Biol Psychiatry 41:995-999, 1997.

229. Litman RE, Torrey EF, Hommer DW, Radant AR, Pickar D, **Weinberger DR**: A quantitative analysis of smooth pursuit eye tracking in monozygotic twins discordant for schizophrenia. Arch Gen Psychiatry 54:417-426, 1997.

230. Goldberg TE, Gold JM, Coppola R, **Weinberger DR**: Unnatural practices, unspeakable actions: A study of delayed auditory feedback in schizophrenia. Am J Psychiatry 154:858-860, 1997.

231. Berman KF, Schmidt PJ, Rubinow DR, Danaceau MA, Van Horn JD, Esposito G, Ostrem JL, **Weinberger DR**: Modulation of cognition-specific cortical activity by gonadal steroids: A PET study in women. Proc Nat Acad Sci (USA) 94:8836-8841, 1997.

232. Mattay VS, Callicott JH, Bertolino A, Santha AKS, Tallent KA, Goldberg TE, Frank JA, **Weinberger DR**: Abnormal functional lateralization of the sensorimotor cortex in patients with schizophrenia. NeuroReport 8:2977-2984, 1997.

233. Sams-Dodd F, Lipska BK, **Weinberger DR**: Neonatal lesions of the rat ventral hippocampus result in hyperlocomotion and deficits in social behaviour in adulthood. Psychopharmacology 132:303-310, 1997.

234. Noga JT, Hyde TM, Herman MM, Spurney CF, Bigelow LB, **Weinberger DR**, Kleinman JE: Glutamate receptors in the postmortem striatum of schizophrenic, suicide, and control brains. Synapse 27:168-176, 1997.

235. Wood GK, Lipska BK, **Weinberger DR**: Behavioral changes in rats with early ventral hippocampal damage vary with age at damage. Dev Brain Res 101:17-25, 1997.

236. Knable MB, Heinz A, Raedler T, **Weinberger DR**: Extrapyramidal side effects with risperidone and haloperidol at comparable D2 receptor occupancy levels. Psychiatry Res: Neuroimaging 75:91-101, 1997.

237. Endres CJ, Kolachana BS, Saunders RC, Su T, **Weinberger DR**, Breier A, Eckelman WC, Carson RE: Kinetic modeling of [11C]-raclopride: Combined PET-microdialysis studies. J Cereb Blood Flow Metabolism 17:932-942, 1997.

238. Hurd YL, Herman MM, Hyde TM, Bigelow LB, **Weinberger DR**, Kleinman JE: Prodynorphin mRNA expression is increased in the patch versus matrix compartment of the caudate nucleus in suicide subjects. Mol Psychiatry 2:495-500, 1997.

239. Bertolino A, Saunders RC, Mattay VS, Bachevalier J, Duyn JH, Frank JA, **Weinberger DR**: Altered development of prefrontal neuronal chemistry in rhesus monkeys with neonatal mesial temporo-limbic lesions: A proton magnetic resonance spectroscopic imaging study. Cerebral Cortex 7:740-748, 1997.

240. Fleming K, Goldberg TE, Binks S, Gold JM, **Weinberger DR**: Visuospatial working memory in patients with schizophrenia. Biol Psychiatry 41:43-49, 1997.

241. Knable MB, Egan MF, Heinz A, Gorey J, Lee KS, Coppola R, **Weinberger DR**: Evidence for a relationship between altered dopaminergic function and negative symptoms in drug free schizophrenic patients: An I-123 IBZM SPECT study. Br J Psychiatry 171:574-577, 1997.

242. Krimer LS, Herman MM, Saunders RC, Boyd JC, Hyde TM, Carter JM, Kleinman JE, **Weinberger DR**: A qualitative and quantitative analysis of the entorhinal cortex in schizophrenia. Cerebral Cortex 7:732-739, 1997.

243. Yang Y, Mattay VS, **Weinberger DR**, Frank JA, Duyn JH: Localized echo volume imaging methods for

functional magnetic resonance imaging. J Magn Reson Imag 7:371-375, 1997.

244. Sood VK, Lee KS, Boulay SF, Rayeq MR, McRee RC, Cohen EI, Zeeberg BR, He XS, **Weinberger DR**, Rice K, Reba RC: *In Vivo* autoradiographic validation of the identity of radioiodinated ®-3-quinuclidinyl (S)-4-iodobenzilate ((R,S)-IQNB) prepared from a tributylstannyl precursor. Appl Radiat Isot 48:27-35, 1997.

245. Ostuni JL, Santha AKS, Mattay VS, **Weinberger DR**, Levin RL, Frank JA: Analysis of interpolation effects in the reslicing of functional MR images. J Comput Assist Tomogr 21:803-810, 1997.

246. Bertolino A, Callicott JH, Nawroz S, Mattay VS, Duyn JH, Tedeschi G, Frank JA, **Weinberger DR**: Reproducibility of proton magnetic resonance spectroscopic imaging in patients with schizophrenia. Neuropsychopharmacology 18:1-9, 1998.

247. Callicott JH, Ramsey NF, Tallent K, Bertolino A, Knable MB, Coppola R, Goldberg T, van Gelderen P, Mattay VS, Frank JA, Moonen CTW, **Weinberger DR**: Three-dimensional PRESTO functional magnetic resonance imaging of a working memory task in schizophrenia. Neuropsychopharmacology 18:186-196, 1998.

248. Feinstein A, Goldberg T, Nowlin B, **Weinberger DR**: Types and characteristics of remote memory impairment in schizophrenia. Schizophr Res 30:155-163, 1998.

249. Wilder KE, **Weinberger DR**, Goldberg TE: Operant conditioning and the orbitofrontal cortex in schizophrenic patients: Unexpected evidence for intact functioning. Schizophr Res 30:169-174, 1998.

250. Heinz A, Knable MB, Coppola R, Gorey J, Jones DW, Lee KS, **Weinberger DR**: Psychomotor slowing, negative symptoms and dopamine receptor availability – an IBZM SPECT study in neuroleptic-treated and drug-free schizophrenic patients. Schizophr Res 31:19-26, 1998.

251. Bertolino A, Callicott JH, Elman I, Mattay VS, Duyn JH, Tedeschi G, Frank JA, Breier A, **Weinberger DR**: Regionally specific neuronal pathology in untreated patients with schizophrenia: A proton magnetic resonance spectroscopic imaging study. Biol Psychiatry 43:641-648, 1998.

252. Saunders RC, Kolachana BS, Bachevalier J, **Weinberger DR**: Neonatal lesions of the medial temporal lobe disrupt prefrontal cortical regulation of striatal dopamine. Nature 393:169-171, 1998.

253. Ruttimann UE, Unser M, Rawlings RR, Rio D, Mattay V, Santha A, Ramsey N, Hommer DW, **Weinberger DR**: Statistical analysis of functional MRI data in the wavelet domain. IEEE Trans Med Imag 17:142-154, 1998.

254. Heinz A, Higley JD, Gorey JG, Saunders RC, Jones DW, Hommer D, Zajicek K, Suomi SJ, Lesch K-P, **Weinberger DR**, Linnoila M: *In vivo* association between alcohol intoxication, aggression and serotonin transporter availability in non-human primates. Am J Psychiatry 155:1023-1028, 1998.

255. Mattay VS, Callicott JH, Bertolino A, Santha KS, Van Horn JD, Tallent KA, Frank JA, **Weinberger DR**: Hemispheric control of motor function: A whole brain echo planar fMRI study. Psychiatry Res: Neuroimaging 83:7-22, 1998.

256. Foundas AL, Eure KF, Luevano LF, **Weinberger DR**: MRI asymmetries of Broca's Area: The pars triangularis and pars opercularis. Brain and Cognition 64:282-296, 1998.

257. Ye FQ, Smith AM, Yang Y, Duyn J, Mattay VS, Ruttiman U, Frank JA, **Weinberger DR**, McLaughlin AC: Quantitation of regional cerebral blood flow increases during motor activation: A steady-state arterial spin

tagging study. Neuroimage 8:44-49, 1998.

258. Van Horn JD, Gold JM, Esposito G, Ostrem JL, Mattay V, **Weinberger DR**, Berman KF: Changing patterns of brain activation during maze learning. Brain Res 793:29-38, 1998.

259. Heinz A, Wolf SS, Jones DW, Knable MB, Gorey JG, Hyde TM, **Weinberger DR**: Tourette's syndrome: Serotonin transporters predict severity of tics. Neurology 51:1069-1074, 1998.

260. Lipska BK, Al-Amin HA, **Weinberger DR**: Excitotoxic lesions of the rat medial prefrontal cortex: Effects on abnormal behaviors associated with neonatal hippocampal damage. Neuropsychopharmacology 19:451-464, 1998.

261. Bertolino A, Kumra S, Callicott JH, Mattay VS, Lestz RM, Jacobsen L, Barnett AS, Duyn JH, Frank JA, Rapoport JL, **Weinberger DR**: Common pattern of cortical pathology in childhood onset and adult onset schizophrenia as identified by proton magnetic resonance spectroscopic imaging. Am J Psychiatry 155:1376-1383, 1998.

262. Chefer SI, Horti AG, Lee KS, Koren AO, Jones DW, Gorey JG, Linkss JM, Mukhin AG, Matochik JA, **Weinberger DR**, London ED: *In vivo* imaging of brain nicotinic acetylcholine receptors with 5-[123I]IODO-A-85380 using single photon emission computed tomography. Life Sci: Pharmacol Lett 63:355-360, 1998.

263. Heinz A, Ragan P, Jones DW, Hommer D, Williams W, Knable MB, Gorey JG, Doty L, Lee KS, Coppola R, **Weinberger DR**, Linnoila M: Reduced dopamine and serotonin transporters in alcohol-dependent patients. Am J Psychiatry 155:1544-1549, 1998.

264. Goldberg TE, Aloia MS, Gourovitch ML, Missar D, Pickar D, **Weinberger DR**: Cognitive substrates of thought disorder: I: The semantic system. Am J Psychiatry 155:1671-1676, 1998.

265. Aloia MS, Gourovitch ML, Missar D, Pickar D, **Weinberger DR**, Goldberg TE: Cognitive substrates of thought disorder: II: Specifying a candidate cognitive mechanism. Am J Psychiatry 155:1677-1684, 1998.

266. Callicott JH, Egan MF, Bertolino A, Mattay VS, Langheim FJP, Duyn JH, Frank JA, **Weinberger DR**: Hippocampal n-acetyl aspartate in unaffected siblings of patients with schizophrenia: A possible intermediate neurobiological phenotype. Biol Psychiatry 44:941-950, 1998.

267. Goldberg TE, Patterson K, Taqqu Y, Wilder K, **Weinberger DR**: Capacity limitations in schizophrenia: Tests of competing hypotheses. Psychol Med 28:665-673, 1998.

268. **Weinberger DR**: Cell biology of the hippocampal formation in schizophrenia. Biol Psychiatry 45:395-402, 1999.

269. Callicott JH, Mattay VS, Bertolino A, Finn K, Coppola R, Frank JA, Goldberg TE, **Weinberger DR**: Capacity constraints in working memory revealed by functional MRI. Cerebral Cortex 9:20-26, 1999.

270. Heinz A, Saunders RC, Kolachana BS, Jones DW, Gorey JG, Bachevalier J, **Weinberger DR**: Striatal dopamine receptors and transporters in monkeys with neonatal temporal limbic damage. Synapse 32:71-79, 1999.

271. Bertolino A, Knable MB, Saunders RC, Callicott JH, Kolachana B, Mattay VS, Bachevalier J, Egan M, Frank JA, **Weinberger DR**: The relationship between dorsolateral prefrontal N-acetylaspartate measures and striatal dopamine activity in schizophrenia. Biol Psychiatry 45:660-667, 1999.

272. Raedler TJ, Knable MB, Lafargue T, Urbina R, Egan MF, Pickar D, **Weinberger DR**: *In vivo* determination of striatal dopamine D_2 receptor occupancy in patients treated with olanzapine. Psychiatry Res: Neuroimaging 90:81-90, 1999.

273. Lillrank SM, Lipska BK, **Weinberger DR**, Fredholm BB, Fuxe K, Ferré S: Adenosine and dopamine receptor antagonist binding in the rat ventral and dorsal striatum: Lack of changes after a neonatal bilateral lesion of the ventral hippocampus. Neurochem Int 34:235-244, 1999.

274. Lillrank SM, Lipska BK, Kolachana BS, **Weinberger DR**: Attenuated extracellular dopamine levels after stress amphetamine in the nucleus accumbens of rats with neonatal ventral hippocampal damage. J Neural Transm 106:183-196, 1999.

275. Schapiro MB, Berman KF, Alexander GE, **Weinberger DR**, Rapoport SI: The relationship of poor performance on the Wisconsin Card Sort Test and prefrontal activation in adults with Down Syndrome. Biol Psychiatry 45:1190-1196, 1999.

276. Foundas AL, Faulhaber JR, Kulynych JJ, Browning CA, **Weinberger DR**: Hemispheric and gender differences in Sylvian Fissure morphology: A quantitative approach using volumetric MRI. Neuropsychiatry Neuropsychol Behav Neurol 12:1-10, 1999.

277. Gourovitch ML, Torrey EF, Gold JM, Randolph C, **Weinberger DR**, Goldberg TE: Neuropsychological performance of monozygotic twins discordant for bipolar disorder. Biol Psychiatry 45:639-646, 1999.

278. Ye FQ, Yang Y, Duyn J, Mattay VS, Frank JA, **Weinberger DR**, McLaughlin AC: Quantitation of regional cerebral blood flow increases during motor activation: A multislice, steady-state, arterial spin tagging study. Magn Reson Med 42:404-407, 1999.

279. Bertolino A, Esposito G, Callicott JH, Mattay VS, Van Horn JD, Frank JA, Berman KF, **Weinberger DR**: Specific relationship between prefrontal neuronal N-acetylaspartate and activation of the working memory cortical network in schizophrenia. Am J Psychiatry 157:26-33, 2000.

280. Bertolino A, Breier A, Callicott JH, Adler C, Mattay VS, Shapiro M, Frank JA, Pickar D, **Weinberger DR**: The relationship between dorsolateral prefrontal neuronal n-acetylaspartate and evoked release of striatal dopamine in schizophrenia. Neuropsychopharmacology 22:125-132, 2000.

281. Heinz A, Goldman D, Jones DW, Palmour R, Hommer D, Gorey JG, Lee KS, Linnoila M, **Weinberger DR**: Genotype influences *in vivo* dopamine transporter availability in human striatum. Neuropsychopharmacology 22:133-139, 2000.

282. McNeil TF, Cantor-Graae E, **Weinberger DR**: The relationship of (OCs) and brain structure size differences in monozygotic twin pairs discordant for schizophrenia: An MRI-OC study. Am J Psychiatry 157:203-212, 2000.

283. Heinz A, Jones DW, Mazzanti C, Goldman D, Ragan P, Hommer D, Linnoila M, **Weinberger DR**: A relationship between serotonin transporter genotype and in vivo protein expression and alcohol neurotoxicity. Biol Psychiatry 47:643-649, 2000.

284. Roffman JL, Lipska BK, Bertolino A, van Gelderen P, Olson AW, Khaing ZZ, **Weinberger DR**: Local and downstream effects of excitotoxic lesions in the rat medial prefrontal cortex: An *in vivo* ^{1}H-MRS investigation. Neuropsychopharmacology 22:430-439, 2000.

285. Elvevåg B, **Weinberger DR**, Suter JC, Goldberg TE: Continuous performance test and schizophrenia: A test of stimulus-response compatibility, working memory, response readiness, or none of the above? Am J

Psychiatry 157:772-780, 2000.

286. Raedler TJ, Knable MB, Jones DW, Lafargue T, Urbina RA, Egan MF, Pickar D, **Weinberger DR**: *In vivo* olanzapine occupancy of muscarinic acetylcholine receptors in patients with schizophrenia. Neuropsychopharmacology 23:56-68, 2000.

287. Lipska BK, **Weinberger DR**: To model a psychiatric disorder in animals: Schizophrenia as a reality test. Neuropsychopharmacology 23:223-239, 2000.

288. Mattay VS, Callicott JC, Bertolino A, Heaton I, Frank JA, Coppola R, Berman KF, Goldberg TE, **Weinberger DR**: Effects of dextroamphetamine on cognitive performance and cortical activation. NeuroImage 12:268-275, 2000.

289. Al-Amin HA, **Weinberger DR**, Lipska BK: Exaggerated MK-801-induced motor hyperactivity in rats with the neonatal lesion of the ventral hippocampus. Behav Pharmacol 11:269-278, 2000.

290. Weickert TW, Goldberg TE, Gold JM, Bigelow LB, Egan MF, **Weinberger DR**: Cognitive impairment in patients with schizophrenia displaying preserved and compromised intellect. Arch Gen Psychiatry 57:907-913, 2000.

291. Gourovitch ML, Goldberg TE, **Weinberger DR**, Kirkby BS, Gold JM, Esposito G, Van Horn JD, Berman KF: A comparison of rCBF patterns during phonologic and semantic fluency in normal humans. Neuropsychology 14:353-360, 2000.

292. van der Veen JW, **Weinberger DR**, Tedeschi G, Frank JA, Duyn JH: Proton magnetic resonance spectroscopic imaging without water suppression. Radiology 21:296-3000, 2000.

293. Ye FQ, Berman KF, Ellmore T, Esposito G, Van Horn JD, Yang Y, Duyn J, Smith AM, Frank JA, **Weinberger DR**, McLaughlin AC: $H_2{}^{15}O$ PET validation of steady-state arterial spin tagging cerebral blood flow measurements in humans. Magn Reson Med 44:450-456, 2000.

294. Gold JM, Rehkemper G, Binks S, Carpenter C, Fleming K, Goldberg TE, **Weinberger DR**: Learning and forgetting in schizophrenia. J Abn Psychol 109:534-538, 2000.

295. Weickert CS, Webster MJ, Colvin SM, Herman MM, Hyde TM, **Weinberger DR**, Kleinman JE: Localization of EGF receptors and putative neuroblasts in human subependymal zone. J Comp Neurology 423:359-372, 2000.

296. Ye FQ, Frank JA, **Weinberger DR**, McLaughlin AC: Noise reduction in 3D perfusion imaging by attenuating the static signal in arterial spin tagging (ASSIST). Magn Reson Med 44:92-100, 2000.

297. Callicott JH, Bertolino A, Mattay VS, Langheim FJP, Duyn J, Coppola, Goldberg TE, **Weinberger DR**: Physiological dysfunction of the dorsolateral prefrontal cortex in schizophrenia revisited. Cerebral Cortex 10:1078-1092, 2000.

298. Callicott JH, Bertolino A, Egan MF, Mattay VS, Langheim FJP, **Weinberger DR**: Selective relationship between prefrontal n-acetylaspartate measures and negative symptoms in schizophrenia. Am J Psychiatry 157:1646-1651, 2000.

299. Khaing ZZ, Weickert CS, **Weinberger DR**, Lipska BK: Differential DNA damage in response to the neonatal and adult excitotoxic hippocampal lesion in rats. Eur J Neurosci 12(12):4424-4433, 2000.

300. Egan MF, Goldberg TE, Gscheidle T, Weirich M, Bigelow LB, **Weinberger DR**: Relative risk of attention deficits in siblings of patients with schizophrenia. Am J Psychiatry 157:1309-1316, 2000.

301. Goldberg TE, Dodge M, Aloia M, Egan MF, **Weinberger DR**: Effects of neuroleptic medications on speech disorganization in schizophrenia biasing associative networks towards meaning. Psychol Med 30:1123-1130, 2000.

302. Bertolino A, Callicott JH, Mattay VS, Weidenhammer KM, Rakow R, Egan MF, **Weinberger DR**: The effect of treatment with antipsychotic drugs on brain *N*-acetylaspartate measures in patients with schizophrenia. Biol Psychiatry 49:39-46, 2001.

303. Elvevåg B, **Weinberger DR**, Goldberg TE: Short-term memory for serial order in schizophrenia: A detailed examination of error types. Neuropsychology 15:128-135, 2001.

304. Al-Amin HA, Weickert CS, Lillrank SM, **Weinberger DR**, Lipska BK: Delayed onset of enhanced MK-801-induced motor hyperactivity after neonatal lesions of the rat ventral hippocampus. Biol Psychiatry 49:528-539, 2001.

305. Egan MF, Goldberg TE, Kolachana BS, Callicott JH, Mazzanti CM, Straub RE, Goldman D, **Weinberger DR**: Effect of COMT $Val^{108/158}$ Met genotype on frontal lobe function and risk for schizophrenia. Proc Nat Acad Sci (USA) 98:6917-6922, 2001.

306. Jaskiw GE, Lipska BK, Karoum F, **Weinberger DR**: Exposure of a "witness rat" to one treated with FG7142 does not increase dopamine turnover in the medial prefrontal cortex of the "witness rat". Neurosci Lett 302:151-153, 2001.

307. Winterer G, Egan MF, Raedler T, Hyde T, Coppola R, **Weinberger DR**: An association between reduced interhemispheric EEG-coherence in the temporal lobe and genetic risk for schizophrenia. Schizophr Res 49:129-143, 2001.

308. Egan MF, Goldberg TE, Gscheidle T, Weirich M, Rawlings R, Hyde TM, Bigelow L, **Weinberger DR**: Relative risk for cognitive impairments in siblings of patients with schizophrenia. Biol Psychiatry 50:98-107, 2001.

309. Lipska BK, Khaing Z, Weickert CS, **Weinberger DR**: Brain-derived neurotrophic factor mRNA expression in rat hippocampus and prefrontal cortex: Effects of neonatal ventral hippocampal damage and antipsychotic drugs. Eur J Neurosci 14:1-12, 2001.

310. Meyer-Lindenberg A, Poline J-B, Kohn PD, Holt JL, Egan MF, **Weinberger DR**, Berman KF: Evidence for abnormal cortical functional connectivity during working memory in schizophrenia. Am J Psychiatry 158:1809-1817, 2001.

311. Egan MF, Hyde TM, Bonomo J, Mattay V, Bigelow L, Goldberg TE, **Weinberger DR**: Relative risk of neurological signs in siblings of patients with schizophrenia. Am J Psychiatry 158:1827-1834, 2001.

312. **Weinberger DR**, Egan MF, Bertolino A, Callicott JH, Mattay VS, Lipska BK, Berman KF, Goldberg TE: Prefrontal neurons and the genetics of schizophrenia. Biol Psychiatry 50:825-844, 2001.

313. Weickert CS, Webster MJ, Hyde TM, Herman MM, **Weinberger DR**, Kleinman JE: Reduced GAP-43 mRNA in dorsolateral prefrontal cortex of schizophrenics. Cerebral Cortex 11:136-147, 2001.

314. Winterer G, Egan MF, Raedler T, Coppola R, **Weinberger DR**: Event-related potentials and genetic risk for schizophrenia. Biol Psychiatry 50:407-417, 2001.

315. Tallent KA, **Weinberger DR**, Goldberg TE: Associating semantic space abnormalities with formal thought disorder in schizophrenia use of triadic comparisons. J Clin Exp Neuropsychol 23:285-296, 2001.

316. Molteni R, Lipska BK, **Weinberger DR**, Racagni G, Riva MA: Developmental and stress-related changes of neurotrophic factor gene expression in an animal model of schizophrenia. Mol Psychiatry 6:285-292, 2001.

317. Heinz A, Mann K, **Weinberger DR**, Goldman D: Serotonergic dysfunction, negative mood states, and response to alcohol. Alcohol Clin Exp Res 25:487-495, 2001.

318. Foundas AL, Weisberg A, Browning CA, **Weinberger DR**: Morphology of the frontal operculum a volumetric magnetic resonance imaging study of the pars triangularis. J Neuroimaging 11:153-159, 2001.

319. Mattay VS, Tessitore A, Callicott JH, Bertolino A, Goldberg T, Chase TN, Hyde TM, **Weinberger DR**: Dopaminergic modulation of cortical function in patients with Parkinson's Disease. Ann Neurol 51:156-164, 2002.

320. Lipska BK, Halim ND, Segal PN, **Weinberger DR**: Effects of reversible inactivation of the neonatal ventral hippocampus on behavior in the adult rat. J Neurosci 22:2835-2842, 2002.

321. Lipska BK, Aultman JM, Verma A, **Weinberger DR**, Moghaddam B: Neonatal damage of the ventral hippocampus impairs working memory in the rat. Neuropsychopharmacology 27:47-54, 2002.

322. **Weinberger DR**, McClure RK: Neurotoxicity, neuroplasticity, and magnetic resonance imaging morphometry: What is happening in the schizophrenic brain? Arch Gen Psychiatry 59:553-558, 2002.

323. Bridle N, Pantelis C, Wood SJ, Coppola R, Velakoulis D, McStephen M, Tierney P, Le TL, Torrey EF, **Weinberger DR**: Thalamic and caudate volumes in monozygotic twins discordant for schizophrenia. Aust NZ J Psych 36:347-354, 2002.

324. Langheim FJP, Callicott JH, Mattay VS, Duyn JH, **Weinberger DR**: Cortical systems associated with covert music rehearsal. NeuroImage 14:901-908, 2002.

325. O'Donnell P, Lewis BL, **Weinberger DR**, Lipska BK: Neonatal hippocampal damage alters electrophysiological properties of prefrontal cortical neurons in adult rats. Cerebral Cortex 12:975-982, 2002.

326. Bertolino A, Roffman JL, Lipska BK, van Gelderen P, Olson A, **Weinberger DR**: Reduced *N*-acetylaspartate in prefrontal cortex of adult rats with neonatal hippocampal damage. Cerebral Cortex 12:983-990, 2002.

327. Wright IC, Sham P, Murray RM, **Weinberger DR**, Bullmore ET: Genetic contributions to regional variability in human brain structure: Methods and preliminary results. NeuroImage 17:256-271, 2002.

328. Hariri A, Tessitore A, Mattay VS, Fera F, **Weinberger DR**: The amygdala response to emotional stimuli: A comparison of faces and scenes. NeuroImage 17:317-323, 2002.

329. Chumakov I, Blumenfeld M, Guerassimenko O, Cavarec L, Palicio M, Abderrahim H, Bougueleret L, Barry C, Tanaka H, La Rosa P, Puech A, Tahri N, Cohen-Akenine A, Delabrosse S, Lissarrague S, Picard F-P, Maurice K, Essioux L, Millasseau P, Grel P, Debailleul V, Simon A-M, Caterina D, Dufaure I, Malekhzadeh K, Belova M, Luan J-J, Bouillot M, Sambucy J-L, Primas G, Saumier M, Boubkiri N, Martin-Saumier S, Nasroune M, Peixoto H, Delaye A, Pinchot V, Bastucci M, Guillou S, Chevillon M,

Sainz-Fuertes R, Meguenni S, Aurich-Costa J, Cherif D, Gimalac A, Van Duijn C, Gauvreau D, Ouelette G, Fortier I, Realson J, Sherbatich T, Riazanskaya N, Rogaev E, Raeymaekers P, Aerssens J, Konings F, Leuten W, Macciardi F, Sham PC, Straub R, **Weinberger DR**, Cohen N, Cohen D: Genetic and physiological data implicating the new human gene G72 and the gene for D-amino acid oxidase in schizophrenia. Proc Natl Acad Sci 99:13675-13680, 2002.

330. Hariri AR, Mattay VS, Tessitore A, Kolachana B, Fera F, Goldman D, Egan MF, **Weinberger DR**: Serotonin transporter genetic variation and the response of the human amygdala. Science 297:400-403, 2002.

331. Tessitore A, Hariri AR, Fera F, Smith WG, Chase TN, Hyde TM, **Weinberger DR**, Mattay VS: Dopamine modulates the response of the human amygdala: A study in Parkinson's disease. J Neuroscience 22:9099-9103, 2002.

332. St. Lawrence KS, Ye FQ, Lewis BK, **Weinberger DR**, Frank JA, McLaughlin AC: The effects of indomethacin on cerebral blood flow at rest and during hypercapnia: An arterial spin tagging study in humans. Magn Reson Imaging 15:628-635, 2002.

333. Meyer-Lindenberg A, Miletich RS, Kohn PD, Esposito G, Carson RE, Quarantelli M, **Weinberger DR**, Berman KF: Reduced prefrontal cortex activation predicts exaggerated striatal dopaminergic function in schizophrenia. Nature Neurosci 5:267-271, 2002.

334. Vawter MP, Crook JM, Hyde TM, Kleinman JE, **Weinberger DR**, Becker KG, Freed WJ: Microarray analysis of gene expression in the prefrontal cortex in schizophrenia: A preliminary study. Schizophr Res 58:11, 2002.

335. Elvevåg B, Weickert T, Wechsler M, Coppola R, **Weinberger DR**, Goldberg TE: An investigation of the integrity of semantic boundaries in schizophrenia. Schizophr Res 53:187-198, 2002.

336. Elvevåg B, **Weinberger DR**, Goldberg TE: The phonological similarity effect in short-term memory serial recall in schizophrenia. Psychiatry Res 112:77-81, 2002.

337. Heinz A, Jones DW, Bissette G, Hommer D, Ragan P, Knable M, Wellek S, Linniola M, **Weinberger DR**: Relationship between cortisol and serotonin metabolites and transporters in alcoholism. Pharmacopsychiatry 35:127-134, 2002.

338. Hariri AR, Mattay VS, Tessitore A, Fera F, Smith WG, **Weinberger DR**: Dextroamphetamine modulates the response of the human amygdale. Neuropsychopharmacology 27:1036-1040, 2002.

339. **Weinberger DR**: Biological phenotypes and genetics research on schizophrenia. World Psychiatry 1:2-6, 2002.

340. Marenco S, Egan MF, Goldberg TE, Knable MB, McClure RK, Winterer G, **Weinberger DR**: Preliminary experience with an ampakine (CX516) as a single agent for the treatment of schizophrenia: A case series. Schizophr Res 57:221-226, 2002.

341. Lipska BK, **Weinberger DR**: A neurodevelopmental model of schizophrenia neonatal disconnection of the hippocampus. Neurotox Res 4:469-475, 2002.

342. Raedler TJ, Knable MB, Jones DW, Urbina RA, Gorey JG, Lee KS, Egan MF, Coppola R, **Weinberger DR**: *In vivo* determination of muscarinic acetylcholine receptor availability in schizophrenia. Am J Psychiatry 160:118-127, 2003.

343. Matsumoto M, Weickert CS, Akil M, Lipska BK, Hyde TM, Herman MM, Kleinman JE, **Weinberger DR**: Catechol O-methyltransferase (COMT) mRNA expression in human and rat brain: Evidence for a role in cortical neuronal function. Neuroscience 116:127-137, 2003.

344. Egan MF, Kojima M, Callicott JH, Goldberg TE, Kolachana BS, Bertolino A, Zaitsev E, Gold B, Goldman D, Dean M, Lu B, **Weinberger DR**: The BDNF val66met polymorphism affects activity-dependent secretion of BDNF and human and human memory and hippocampal function. Cell 112:257-269, 2003.

345. Marenco S, **Weinberger DR**, Schreurs BG: Single-cue delay and trace classical conditioning in schizophrenia. Biol Psychiatry 53:390-402, 2003.

346. Chrapusta SJ, Egan MF, Wyatt RJ, **Weinberger DR**, Lipska BK: Neonatal ventral hippocampal damage modifies serum corticosterone and dopamine release responses to acute footshock in adult Sprague-Dawley rats. Synapse 47:270-277, 2003.

347. Nicolson R, Brookner F, Lenane M, Gochman P, Ingraham LJ, Egan MF, Kendler KS, Pickar D, **Weinberger DR**, Rapoport JL: Parental schizophrenia spectrum disorders in childhood-onset and adult-onset schizophrenia. Am J Psychiatry 160:490-495, 2003.

348. Hariri AR, Mattay VS, Tessitore A, Fera F, **Weinberger DR**: Neocortical modulation of the amygdala response to fearful stimuli. Biol Psychiatry 53:494-501, 2003.

349. Akil M, Kolachana BS, Rothmond DA, Hyde TM, **Weinberger DR**, Kleinman JE: Catechol-O-Methyltransferase genotype and dopamine regulation in the human brain. J Neuroscience 23:2008-2013, 2003.

350. Callicott JH, Egan MF, Mattay VS, Bertolino A, Bone AD, Verchinski B, **Weinberger DR**: Abnormal fMRI response of the dorsolateral prefrontal cortex in cognitively intact siblings of patients with schizophrenia. Am J Psychiatry 160:709-719, 2003.

351. Nadri C, Lipska BK, Kozlovsky N, **Weinberger DR**, Belmaker RH, Agam G: Glycogen synthase kinase (GSK)-3 beta levels and activity in a neurodevelopmental rat model of schizophrenia. Dev Brain Res 141:33-37, 2003.

352. Mattay VS, Goldberg TE, Fera F, Hariri AR, Tessitore A, Egan MF, Kolachana B, Callicott JH, **Weinberger DR**: COMT val^{158}met genotype and individual variation in the brain response to amphetamine. Proc Nat Acad Sci (USA) 100:6186-6191, 2003.

353. Bertolino A, Frye M, Callicott JH, Mattay VS, Rakow R, Shelton-Repella J, Post R, **Weinberger DR**: Neuronal pathology in the hippocampal area of patients with bipolar disorder: A study with proton magnetic resonance spectroscopic imaging. Biol Psychiatry 53:906-913, 2003.

354. Lipska BK, Luu S, Halim ND, **Weinberger DR**: Behavioral effects of neonatal and adult excitotoxic lesions of the mediodorsal thalamus in the adult rat. Brain Res 141:105-111, 2003.

355. Jaskiw GE, Lipska BK, **Weinberger DR**: The anxiogenic β-carboline FG-7142 inhibits locomotor exploration similarly in postweanling and adult rats. Neurosci Lett 346:5-8, 2003.

356. Hariri AR, Goldberg TE, Mattay VS, Kolachana BS, Callicott JH, Egan MF, **Weinberger DR**: Brain-derived neurotrophic factor val^{66}met polymorphism affects human memory-related hippocampal activity and predicts memory performance. J Neurosci 23:6690-6694, 2003.

357. Raedler TJ, Knable MB, Jones DW, Urbina RA, Egan MF, **Weinberger DR**: Central muscarinic

acetylcholine receptor occupancy in patients treated with clozapine. Neuropsychopharmacology 28:1531-1537, 2003.

358. Matsumoto M, Weickert CS, Beltaifa S, Kolachana B, Chen JS, Hyde TM, Herman MM, **Weinberger DR**, Kleinman JE: Catechol O-methyltransferase (COMT) mRNA expression in the dorsolateral prefrontal cortex of patients with schizophrenia. Neuruospchopharmacology 28:1521-1530, 2003.

359. Goldberg TE, Egan MF, Gscheidle T, Coppola R, Weickert T, Kolachana BS, Goldman D, **Weinberger DR**: Executive subprocesses in working memory – Relationship to catechol-O-methyltransferase Val158Met genotype and schizophrenia. Arch Gen Psychiatry 60:889-896, 2003.

360. Halim ND, Weickert CS, McClintock BW, Hyde TM, **Weinberger DR**, Kleinman JE, Lipska BK: Presynaptic proteins in the prefrontal cortex: Postmortem studies in schizophrenia and in an animal model of abnormal prefrontal development. Mol Psychiatry 8:797-810, 2003.

361. Elvevåg B, McCormack T, Gilbert A, Brown GDA, **Weinberger DR**, Goldberg TE: Duration judgements in patients with schizophrenia. Psychol Med 33:1249-1261, 2003.

362. Callicott JH, Mattay VS, Verchinski BA, Marenco S, Egan MF, **Weinberger DR**: Complexity of prefrontal cortical dysfunction in schizophrenia: More than up or down. Am J Psychiatry 160:2209-2215, 2003.

363. Winterer G, Egan MF, Raedler T, Sanchez C, Jones DW, Coppola R, **Weinberger DR**: P300 and genetic risk for schizophrenia. Arch Gen Psychiatry 60:1158-1167, 2003.

364. Winterer G, Coppola R, Egan MF, Goldberg TE, **Weinberger DR**: Functional and effective frontotemporal connectivity and genetic risk for schizophrenia. Biol Psychiatry 54:1181-1192, 2003.

365. Lipska BK, Lerman DN, Khaing ZZ, **Weinberger DR**: The neonatal ventral hippocampal lesion model of schizophrenia: Effects on dopamine and GABA mRNA markers in the rat midbrain. Eur J Neurosci 18(11):3097-3104, 2003.

366. Bertolino A, Sciota D, Brudaglio F, Altamura M, Blasi G, Bellomo A, Antonucci N, Callicott JH, Goldberg TE, Scarabino T, **Weinberger DR**, Nardini M: Working memory deficits and levels of N-acetylaspartate in patients with schizophreniform disorder. Am J Psychiatry 160:483-489, 2003.

367. Lipska BK, Lerman DN, Khaing ZZ, Weickert CS, **Weinberger DR**: Gene expression in dopamine and GABA systems in an animal model of schizophrenia: Effects of antipsychotic drugs. Eur J Neurosci 18(2):391-402, 2003.

368. Heinz A, Jones DW, Gorey JG, Bennet A, Suomi SJ, Linnoila M, **Weinberger DR**, Higley JD: Serotonin transporter availability correlates with alcohol intake in non-human primates. Mol Psychiatry 8:231-234, 2003.

369. Weickert TW, Terrazas A, Bigelow LB, Malley JD, Hyde T, Egan MF, **Weinberger DR**, Goldberg TE: Habitat and skill learning in schizophrenia evidence of normal striatal processing with abnormal cortical input. Learn Mem 9:430-442, 2003.

370. Weickert TW, Goldberg TE, Marenco S, Bigelow LB, Egan MF, **Weinberger DR**: Comparison of cogmitive performances during a placebo period and an atypical antipsychotic treatment period in schizophrenia: Critical examination of confounds. Neuropsychopharmacology 28:1491-1500, 2003.

371. Weickert CS, Hyde TM, Lipska BK, Herman MM, **Weinberger DR**, Kleinman JE: Reduced brain-derived

neurotrophic factor in prefrontal cortex of patients with schizophrenia. Mol Psychiatry 8:592-610, 2003.

372. Styner M, Gerig G, Lieberman J, Jones D, **Weinberger DR**: Statistical shape analysis of neuroanatomical structures based on medial models. Med Image Anal 7:207-220, 2003.

373. Scamvougeras A, Kigar DL, Jones D, **Weinberger DR**, Witelson SF: Size of the human corpus callosum is genetically determined: and MRI study in mono and dizygotic twins. Neurosci Lett 338:91-94, 2003.

374. Egan MF, **Weinberger DR**, Lu B: Schizophrenia, III: Brain-derived neurotrophic factor and genetic risk. Am J Psychiatry 160:1242, 2003.

375. Winterer G, Coppola R, Goldberg TE, Egan MF, Jones DW, Sanchez CE, **Weinberger DR**: Prefrontal broadband noise, working memory, and genetic risk for schizophrenia. Am J Psychiatry 161:1-11, 2004.

376. Marenco S, Carson RE, Berman KF, Herscovitch P, **Weinberger DR**: Nicotine-induced dopamine release in primates measured with [^{11}C]Raclopride PET. Neuropsychopharmacology 29:259-268, 2004.

377. Elvevåg B, Fisher JE, Weickert TW, **Weinberger DR**, Goldberg TE: Lack of false recognition in schizophrenia: A consequence of poor memory? Neuropsychologia 42:546-554, 2004.

378. Hashimoto R, Straub RE, Weickert CS, Hyde TM, Kleinman JE, **Weinberger DR**: Expression analysis of neuroregulin-1 in the dorsolateral prefrontal cortex in schizophrenia. Mol Psychiatry 9:299-307, 2004.

379. Vawter MP, Weickert CS, Ferran E, Matsumoto M, Overman K, Hyde TM, **Weinberger DR**, Bunney WE, Kleinman JE: Gene expression of metabolic enzymes and a protease inhibitor in the prefrontal cortex are decreased in schizophrenia. Neurochem Res 29:1245-1255, 2004.

380. Weickert CS, Straub RE, McClintock BW, Matsumoto M, Hashimoto R, Hyde TM, Herman MM, **Weinberger DR**, Kleinman JE: Human dysbindin (DTNBP1) gene expression in normal brain and in schizophrenic prefrontal cortex. Arch Gen Psychiatry 61:544-555, 2004.

381. Knutson B, Bjork JM, Fong GW, Hommer D, Mattay VS, **Weinberger DR**: Amphetamine modulates human incentive processing. Neuron 43:261-269, 2004.

382. Bertolino A, Blasi G, Caforio G, Latorre V, De Candia M, Rubino V, Callicott JH, Mattay VS, Bellomo A, Scarabino T, **Weinberger DR**, Nardini M: Functional lateralization of the sensorimotor cortex in patients with schizophrenia: Effects of treatment with olanzapine. Biol Psychiatry 56:190-197, 2004.

383. Green MF, Nuechterlein KH, Gold JM, Barch DM, Cohen J, Essock S, Fenton WS, Frese F, Goldberg TE, Heaton RK, Keefe RSE, Kern RS, Kraemer H, Stover E, **Weinberger DR**, Zalcman S, Marder SR: Approaching a consensus cognitive battery for clinical trials in schizophrenia: The NIMH-Matrics conference to select cognitive domains and test criteria. Biol Psychiatry 56:301-307, 2004.

384. Egan MF, Straub RE, Goldberg TE, Yakub I, Callicott JH, Hariri AR, Mattay VS, Bertolino A, Hyde TM, Weickert CS, Akil A, Crook J, Vakkalanka RK, Balkissoon R, Gibbs RA, Kleinman JE, **Weinberger DR:** Variation in *GRM3* affects cognition, prefrontal glutamate, and risk for schizophrenia. Proc Nat Acad Sci (USA) 101:12604-12609, 2004.

385. Blasi G, Bertolino A, Brudaglio F, Sciota D, Altamura M, Antonucci N, Scarabino T, **Weinberger DR**, Nardini M: Hippocampal neurochemical pathology in patients at first episode of affective psychiatric: A proton magnetic resonance spectroscopic imaging study. Psychiatry Res: Neuroimaging 131:95-105, 2004.

386. Addington AM, Gornick M, Sporn AL, Gogtay N, Greenstein D, Lenane M, Gochman P, Baker N, Balkissoon R, Vakkalanka RK, **Weinberger DR**, Straub RE, Rapoport JL: Polymorphisms in the 13q33.2 gene G72/G30 are associated with childhood-onset schizophrenia and psychosis not otherwise specified. Biol Psychiatry 55:976-980, 2004.

387. Chen J, Lipska BK, Halim N, Ma QD, Matsumoto M, Melhem S, Kolachana BS, Hyde TM, Herman MM, Apud J, Egan MF, Kleinman JE, **Weinberger DR**: Functional analysis of genetic variation in catechol-o-methyltransferase (COMT): Effects on mRNA, protein, and enzyme activity in postmortem human brain. Am J Hum Genet 75:807-821, 2004.

388. Bertolino A, Caforio G, Blasi G, De Candia M, Latorre V, Petruzzella V, Altamura M, Nappi G, Papa S, Callicott JH, Mattay VS, Bellomo A, Scarabino T, **Weinberger DR**, Nardini M: Interaction of COMT $Val^{108/158}$ Met genotype and olanzapine treatment on prefrontal cortical function in patients with schizophrenia. Am J Psychiatry 161:1798-1805, 2004.

389. Heinz A, Jones DW, Zajicek K, Gorey JG, Juckel G, Highley JD, **Weinberger DR**: Depletion and restoration of endogenous monamines affects β-CIT binding to serotonin but not dopamine transporters in non-human primates. J Neural Transm 68:29-38, 2004.

390. Heinz A, Braus DF, Romero B, Gallinat J, Puls I, Juckel G, **Weinberger DR**: Genetic and pharmacological effects on prefrontal cortical function in schizophrenia. Der Nervenarzt 75:845-856, 2004.

391. Goldberg TE, **Weinberger DR**: Genes and the parsing of cognitive processes. Trends Cogn Sci 8:325-335, 2004.

392. Pezawas L, Verchinski BA, Mattay VS, Callicott JH, Kolachana BS, Straub RE, Egan MF, Meyer-Lindenberg A, **Weinberger DR**: The BDNF val66met polymorphism and variation in human cortical morphology. J Neurosci 24:10099-10102, 2004.

393. Winterer G, **Weinberger DR**: Genes, dopamine and cortical signal-to-noise in schizophrenia. Trends Neurosci 27:683-690, 2004.

394. Numakawa T, Yagasaki Y, Ishimoto T, Suzuki T, Iwata N, Ozaki T, Taguchi T, Tatsumi M, Kunitoshi K, Straub RS, **Weinberger DR**, Kunugi H, Hashimoto R: Evidence of novel neuronal functions of dysbindin, a susceptibility gene for schizophrenia. Human Mol Genetics 13:2699-2708, 2004.

395. Foltynie T, Goldberg TE, Lewis SGJ, Blackwell AD, Kolachana BS, **Weinberger DR**, Robbins TW, Barker RA: Planning ability in Parkinson's disease is influenced by the COMT Val^{158}Met polymorphism. Movement Disorders 8:885-891, 2004.

396. Weickert TW, Goldberg TE, Mishara A, Apud JA, Kolachana BS, Egan MF, **Weinberger DR**: Catechol-O-methyltransferase $Val^{108-158}$met genotype predicts working memory response to antipsychotic medications. Biol Psychiatry 56:677-682, 2004.

397. Halim ND, Weickert CS, McClintock BW, **Weinberger DR**, Lipska BK: Effects of chronic haloperidol and clozapine treatment on neurogenesis in the adult rat hippocampus. Neuropsychopharmacology 29:1063-1069, 2004.

398. Harrison P, **Weinberger DR**: Schizophrenia genes, gene expression, and neuropathology: On the matter of their convergence. Mol Psychiatry 10:40-68, 2005.

399. Sporn A, Greenstein D, Gogtay N, Sailer F, Hommer DW, Rawlings R, Nicolson R, Egan MF, Lenane M, Gochman P, **Weinberger DR,** Rapoport JL: Childhood-onset schizophrenia: Smooth pursuit eye-tracking dysfunction in family members. Schizophr Res 73:243-252, 2005

400. Hariri AR, Drabant EM, Munoz KE, Kolachana BS, Mattay VS, Egan MF, **Weinberger DR**: A susceptibility gene for affective disorders and the response of the human amygdale. Arch Gen Psychiatry 62:146-152, 2005.

401. Meyer-Lindenberg A, Olsen RK, Kohn PD, Brown T, Egan MF, **Weinberger DR**, Berman KF: Regionally specific disturbance of dorsolateral prefrontal-hippocampal functional connectivity in schizophrenia. Arch Gen Psychiatry 62:379-386, 2005.

402. Styner M, Lieberman JA, McClure R, **Weinberger DR**, Jones D, Gerig G: Morphometric analysis of lateral ventricles in schizophrenia and healthy controls regarding genetic and disease specific factors. Proc Nat Acad Sci (USA) 102:4872-4877, 2005.

403. Blasi G, Mattay VS, Bertolino A, Elvevåg B, Callicott JH, Das S, Kolachana BS, Egan MF, Goldberg TE, **Weinberger DR**: Effect of catechol-o-methyltransferase $Val^{158}Met$ genotype on attentional control. J Neurosci 25:5038-5045, 2005.

404. Callicott JH, Straub RE, Callicott JH, Pezawas L, Egan MF, Mattay VS, Hariri AR, Verchinski BA, Meyer-Lindenberg A, Kolachana B, Goldberg TE, **Weinberger DR**: Variation in DISC1 affects hippocampal structure and function and increases risk for schizophrenia. Proc Nat Acad Sci (USA) 102:8627-8632, 2005.

405. Bertolino A, Arciero G, Rubino V, Latorre V, De Candia M, Mazzola V, Blasi G, Caforio G, Hariri A, Kolachana B, Nardini M, **Weinberger DR**, Scarabino T: Variation of human amygdala response during threatening stimuli as a function of 5'HTTLPR genotype and personality style. Biol Psychiatry 57:1517-1525, 2005.

406. Weickert CS, Ligons DL, Romanczyk T, Ungaro G, Hyde TM, Herman MM, **Weinberger DR**, Kleinman JE: Reductions in neurotrophin receptor mRNAs in the prefrontal cortex of patients with schizophrenia. Mol Psychiatry 10:637-650, 2005.

407. Addington AM, Gornick M, Duckworth J, Sporn A, Gogtay N, Bobb A, Greenstein D, Lenane M, Gochman P, Baker N, Balkissoon R, Vakkalanka RK, **Weinberger DR**, Rapaport JL, Straub RE: *GAD1* (2q31.1), which encodes glutamic acid decarboxylase (GAD_{67}), is associated with childhood-onset schizophrenia and cortical gray matter volume loss. Mol Psychiatry 10:581-588, 2005.

408. Meyer-Lindenberg A, Kohn PD, Kolachana B, Kippenhan S, McInerney-Leo A, Nussbaum R, **Weinberger DR**, Berman KF: Midbrain dopamine and prefrontal function in humans: Interaction and modulation by COMT genotype. Nature Neurosci 8:594-596, 2005.

409. Meyer-Lindenberg A, Mervis CB, Sarpal D, Koch P, Steele S, Kohn P, Marenco S, Morris CA, Das S, Kippenhan S, Mattay VS, **Weinberger DR**, Berman KF: Functional, structural and metabolic abnormalities of the hippocampal formation in Williams syndrome. J Clin Investigation 7:1888-1895, 2005.

410. Pezawas L, Meyer-Lindenberg A, Drabant EM, Verchinski BA, Munoz K, Kolachana BS, Egan MF, Mattay VS, **Weinberger DR**: 5-HTTLPR polymorphism impacts human cingulated-amygdala interactions: A genetic susceptibility mechanism for depression. Nature Neurosci 8:828-834, 2005.

411. Wong AHC, Lipska BK, Likhodi O, Boffa E, **Weinberger DR**, Kennedy JL, Van Tol HHM: Cortical gene expression in the neonatal ventral-hippocampal lesion rat model. Schizophr Res 77:261-270, 2005.

412. **Weinberger DR**: Genetic mechanisms of psychosis: *In vivo* and postmortem genomics. Clin Therapeutics 27:S8-S15, 2005.

413. Gornick MC, Addington AM, Sporn A, Gogtay N, Greenstein D, Lenane M, Gochman P, Ordonez A, Balkissoon R, Vakkalanka R, **Weinberger DR**, Rapoport JL, Straub RE: Dysbindin (DTNBP1, 6p22.3) is associated with childhood-onset psychosis and endophenotypes measured by the premorbid adjustment scale (PAS). J Autism Dev Dis 35:831-838, 2005.

414. Fera F, Weickert TW, Goldberg TE, Tessitore A, Hariri A, Das S, Lee S, Zoltick B, Meeter M, Myers C, Gluck M, **Weinberger DR**, Mattay VS: Neural mechanisms underlying probabilistic category learning in normal aging. J Neurosci 25:11340-11348, 2005.

415. Matsumoto M, Beltaifa S, Weickert CS, Hyde TM, Herman MM, Saunders RC, Lipska BK, **Weinberger DR**, Kleinman JE: A conserved mRNA expression profile of SREB2 (GPR85) in adult human, monkey and rat forebrain: Possible implication in neural plasticity. Brain Res 134:81-95, 2005.

416. Prathikanti S, **Weinberger DR**: Psychiatric genetics – The new era: Genetic research and some clinical implications. Br Med Bull 73-74:107-122, 2005.

417. Tessitore A, Hariri AR, Fera F, Smith WG, Das S, **Weinberger DR**, Mattay VS: Functional changes in the activity of brain regions underlying emotion processing in the elderly. Psychiatry Res 139:9-18, 2005.

418. Paul BM, Elevag B, Bokat CE, **Weinberger DR**, Goldberg TE: Levels of processing effects on recognition memory in patients with schizophrenia. Schizophr Res 74:101-110, 2005.

419. Foltynie T, Lewis SG, Goldberg TE, Blackwell AD, Kolachana BS, **Weinberger DR**, Robbins TW, Barker RA: The BDNF val66met polymorphism has gender specific influence on planning ability in Parkinson's disease. J Neurol 252:833-838, 2005.

420. Andreasen NC, Carpenter WT, Kane JM, Lasser RA, Marder SR, **Weinberger DR**: Remission in schizophrenia: proposed criteria and rationale for consensus. Am J Psychiatry 163:441-449, 2005.

421. Mattay VS, Fera F, Tessitore A, Hariri AR, Berman KF, Das S, Meyer-Lindenberg A, Goldberg TE, Callicott JH, **Weinberger DR**: Neurophysiological correlates of age-related changes in working memory capacity. Neurosci Lett 392:32-37, 2006.

422. Sartorius LJ, Nagappan G, Lipska BK, Lu B, Sei Y, Ren-Patterson R, **Weinberger DR**, Harrison PJ: Alternative splicing of human metabotropic glutamate receptor 3. J Neurochem 96:1139-1148, 2006.

423. Diaz-Asper CM, **Weinberger DR**, Goldberg TE: Catechol-o-methyltransferase polymorphisms and some implications for cognitive therapeutics. NeuroRx 3:97-105, 2006.

424. Apud J, **Weinberger DR**: Pharmacogenetic tools for the development of target-oriented cognitive-enhancing drugs. NeuroRx 3:106-116, 2006.

425. Marenco S, **Weinberger DR**: Therapeutic potential of positive AMPA modulators in the treatment of neuropsychiatric disorders. CNS Drugs 20:173-185, 2006.

426. Blasi G, Goldberg TE, Weickert T, Das S, Kohn P, Zoltick B, Bertolino B, Callicott JH, **Weinberger DR**, Mattay VS: Brain Regions underlying response inhibition and interference monitoring and suppression. Eur J Neurosci 23:1658-1664, 2006.

427. Power KJ, Binder TL, Hori S, Nakabeppu Y, **Weinberger DR**, Lipska BK, Robertson GS: Neonatal ventral hippocampal lesions produce an elevation of ΔFosB-Like protein(s) in the rodent neocortex. Neuropsychopharmacology 31:700-711, 2006.

428. Bertolino A, Blasi G, Latorre V, Rubino V, Rampino A, Sinibaldi L, Caforio G, Petruzzella V, Pizzuti A, Scarabino T, Nardini M, **Weinberger DR**, Dallapiccola B: Addictive effects of genetic variation in dopamine regulating genes on working memory cortical activity in human brain. J Neurosci 26:3918-3922, 2006.

429. Marenco S, Steele SU, Egan MF, Goldberg TE, Straub RE, Sharrief AZ, **Weinberger DR**: Effect of metabotropic glutamate receptor 3 genotype on *N*-acetylaspartate measures in the dorsolateral prefrontal cortex. Am J Psychiatry 163:740-742, 2006.

430. Hariri A, Drabant EM, **Weinberger DR**: Imaging genetics: Perspectives from studies of genetically driven variation in serotonin function and corticolimbic affective processing. Biol Psychiatry 59:888-897, 2006.

431. Meyer-Lindenberg A, Nichols T, Callicott J, Straub RE, Ding J, Kolachana B, Buckholtz J, Mattay VS, Egan MF, **Weinberger DR**: Impact of complex genetic variation in COMT on human brain function. Mol Psychiatry 11:867-877, 2006.

432. Goldberg TE, Straub RE, Callicott H, Hariri A, Mattay VS, Bigelow B, Coppola R, Egan MF, **Weinberger DR:** The G72/G30 Gene Complex and Cognitive Abnormalities in Schizophrenia. Neuropsychopharmacology 31:2022-2032, 2006.

433. Meyer-Lindenberg A, Buckholtz JW, Kolachana B, Hariri A, Pezawas L, Blasi G, Wabnitz A, Honea R, Verchinski B, Callicott JH, Egan M, Mattay V, **Weinberger DR**: Neural mechanisms of genetic risk for impulsivity and violence in humans. Proc Natl Acad Sci (USA)103:6269-6274, 2006.

434. Lipska BK, Peters T, Hyde TM, Halim N, Horowitz C, Mitkus S, Weickert CS, Matsumoto M, Sawa A, Straub RE, Vakkalanka R, Herman MM, **Weinberger DR**, Kleinman JE: Expression of DISC1 binding partners is reduced in schizophrenia and associated with DISC1 SNPs. Hum Mol Gen 15:1245-1258, 2006.

435. Tunbridge EM, **Weinberger DR**, Harrison PJ: A novel protein isoform of catechol o-methyltransferase (COMT): Brain expression analysis in schizophrenia and bipolar disorder and effect of Val^{158}Met genotype. Mol Psychiatry 2:116-117, 2006.

436. Tunbridge EM, Harrison PJ, Egan MF, **Weinberger DR**: Catechol-o-methyl transferase, cognition and psychosis: Val^{158}met and beyond. Biol Psychiatry 60:141-151, 2006.

437. Marenco S, Rawlings R, Rohde GK, Barnett AS, Honea RA, Pierpaoli C, **Weinberger DR**: Regional distribution of measurement error in diffusion tensor imaging. Psychiatry Res: Neuroimaging 147:69-78, 2006.

438. Winterer G, Musso F, Beckmann C, Mattay V, Egan MF, Jones DW, Callicott JH, Coppola R, **Weinberger DR**: Instability of prefrontal signal processing in schizophrenia. Am J Psychiatry 29:1311-1318, 2006.

439. Meyer-Lindenberg A, **Weinberger DR**: Intermediate phenotypes and genetic mechanisms of psychiatric disorders. Nature Rev Neurosci 7:818-827, 2006.

440. Lipska B, Mitkus S, Caruso M, Hyde T, Chen JS, Vakkalanka R, Straub RE, **Weinberger DR**, Kleinman JE: RGS4 mRNA expression in postmortem human cortex is associated with COMT Val158Met genotype and COMT enzyme activity. Hum Mol Gen 15:2804-2812, 2006.

441. Winterer G, Musso F, Vucurevic G, Stoeter P, Konrad A, Seker B, Gallinat J, Dahmen N, **Weinberger DR**: COMT-genotype predicts BOLD signal and noise characteristics in prefrontal circuits. NeuroImage 32:1722-1732, 2006.

442. Hashimoto R, Numakawa T, Ohnishi T, Kumamaru E, Yagasaki Y, Ishimoto T, Mori T, Nemoto K, Adachi N, Izumi A, Chiba S, Noguchi H, Suzuki T, Iwata N, Ozaki N, Taguchi T, Kamiya A, Kosuga A, Tatsumi M, Kaminima K, **Weinberger DR**, Sawa A, Kunugi H: Impact of the DISC1 Ser704Cys polymorphism on risk for major depression, brain morphology, and ERK signaling. Hum Mol Genet 15:3024-3033, 2006.

443. Tan HY, Sust S, Buckholtz JW, Mattay VS, Meyer-Lindenberg A, Egan MF, **Weinberger DR**, Callicott JH: Dysfunctional prefrontal regional specialization and its compensation in patients with schizophrenia. Am J Psychiatry 163:1969-1977, 2006.

444. Chen J, Lipska BK, **Weinberger DR**: Genetic mouse models of schizophrenia: From hypothesis-based to susceptibility gene-based models. Biol Psychiatry 59:1180-1188, 2006.

445. Bertolino A, Rubino V, Sambataro F, Blasi G, Latorre V, Fazio L, Caforio G, Petruzzella V, Kolachana B, Hariri A, Meyer-Lindenberg A, Nardini M, **Weinberger DR**, Scarabino T: Prefrontal-hippocampal coupling during memory processing is modulated by COMT Val^{158}Met genotype. Biol Psychiatry 60:1250-1258, 2006.

446. Drabant EM, Hariri AR, Meyer-Lindenberg A, Munoz KE, Mattay VS, Kolachana B, Egan MF, **Weinberger DR**: Catechol O-methyltransferase Val^{158}Met Genotype and Neural Mechanisms of Arousal and Regulation. Arch Gen Psychiatry 63:1396-1406, 2006.

447. Chiba S, Hashimoto R, Hattori S, Yohda M, Lipska B, **Weinberger DR**, Kunugi H: Effect of antipsychotic drugs on DISC1 and dysbindin expression in mouse frontal cortex and hippocampus. J Neural Transm 113:1337-1346, 2006.

448. Bertolino A, Caforio G, Petruzzella V, Latorre V, Rubino V, Dimalta S, Torraco A, Blasi G, Quartesan R, Mattay VS, Callicott JH, **Weinberger DR**, Scarabino T: Prefrontal dysfunction in schizophrenia controlling for COMT val^{158}met genotype and working memory performance. Psychiatry Res: Neuroimaging 147:221-226, 2006.

449. McClure RK, Phillips I, Jazayerli R, Barnett A, Coppola R, **Weinberger DR**: Regional change in brain morphometry in schizophrenia associated with antipsychotic treatment. Psychiatry Res: Neuroimaging 148:121-132, 2006.

450. Law AJ, Lipska BK, Weickert CS, Hyde TM, Straub RE, Hashimoto R, Harrison PJ, Kleinman JE, **Weinberger DR**: Neuregulin 1 transcripts are differentially expressed in schizophrenia and regulated by 5' SNPs associated with the disease. Proc Natl Acad Sci (USA) 103:6747-6752, 2006.

451. Winterer G, Egan MF, Kolachana BS, Goldberg TE, Coppola R, **Weinberger DR**: Prefrontal electrophysiologic "noise" and COMT genotype in schizophrenia. Biol Psych 60:578-584, 2006.

452. Marenco S, Bertolino A, **Weinberger DR**: *In vivo* NMR measures of NAA and the neurobiology of schizophrenia. Adv Exp Med Biol 576:227-240, 2006.

453. Lipska BK, Mitkus SN, Mathew SV, Fatula R, Hyde TM, **Weinberger DR**, Kleinman JE: Functional genomics in postmortem human brain: abnormalities in a DISC1 molecular pathway in schizophrenia. Dialogues Clin Neurosci 8:353-357, 2006.

454. Tunbridge EM, Weickert CS, Kleinman JE, Herman MM, Chen J, Kolachana BS, Harrison PJ, **Weinberger DR**: Catechol-o-methyltransferase enzyme activity and protein expression in human prefrontal cortex across the postnatal lifespan. Cerebral Cortex on line 7/11/2006.

455. Talkowski ME, Seltman H, Bassett AS, Brzustowicz LM, Chen X, Chowdari KV, Collier DA, Cordeiro Q, Corvin AP, Deshpande SN, Egan MF, Gill M, Kendler KS, Kirov G, Heston LL, Levitt P, Lewis DA, Li T, Mirnics K, Morris DW, Norton N, O'Donovan MC, Owen MJ, Richard C, Semwal P, Dobell JK, St. Clair D, Straub RE, Thelma BK, Vallada H, **Weinberger DR**, Williams NM, Wood J, Zhang F, Devlin B, Nimgaonkar VL: Evaluation of a susceptibility gene for schizophrenia; genotype based meta-analysis of RGS4 polymorphisms from thirteen independent samples. Biol Psychiatry 60:152-162, 2006.

456. Blasi G, Goldberg TE, Elvevåg B, Rasetti R, Bertolino A, Cohen J, Alce G, Zoltick B, **Weinberger DR**, Mattay VS: Differentiating allocation of resources and conflict detection within attentional control processing. Eur J Neurosci 25:594-602, 2007.

457. Jazbec S, Pantelis C, Robbins T, Weickert T, **Weinberger DR**, Goldberg TE: Intra-dimensional/extra-dimensional set-shifting performance in schizophrenia: impact of distractors. Schizophr Res 89:339-349, 2007.

458. Nicodemus KK, Kolachana BS, Vakkalanka R, Straub RE, Giegling I, Egan MF, Rujescu D, **Weinberger DR**: Evidence for statistical epistasis between catechol-*O*-methyltransferase (COMT) and polymorphisms in RGS4, G72 (DAOA), GRM3 and DISC1: Influence on risk of schizophrenia. Hum Genet 120:889-906, 2007.

459. Meyer-Lindenberg A, Straub RE, Lipska BK, Verchinski BA, Goldberg TE, Callicott JH, Egan MF, Huffaker SS, Mattay VS, Kolachana BS, Kleinman JE, **Weinberger DR**: Genetic evidence implicating DARP-32 in human fronto-striatal structure, function and cognition. J Clin Investigation on line 2/8/2007.

460. Law AJ, Kleinman JE, **Weinberger DR**, Weickert CS: Disease associated intronic variants in the erbb4 gene are related to altered erbb4 splice variant expression in the brain in schizophrenia. Hum Mol Genet 16:129-144, 2007.

461. Buckholtz JW, Meyer-Lindenberg A, Honea RA, Straub RE, Pezawas L, Egan MF, Vakkalanka R, Kolachana B, Verchinski BA, Sust S, Mattay VS, **Weinberger DR**, Callicott JH: Allelic variation in RGS4 impacts functional and structural connectivity in the human brain. J of Neurosci 27:1584-1593, 2007.

462. Altamura M, Elvevag B, Blasi G, Bertolino A, Callicott JH, **Weinberger DR**, Mattay VS, Goldberg TE: Dissociating the effects of Sternberg working memory demands in prefrontal cortex. Psychiatry Res 154:103-114, 2007.

463. Heinz A, Smolka MN, Braus DF, Wrase J, Beck A, Flor H, Mann K, Schumann G, Buchel C, Hariri AR, **Weinberger DR**: Serotonin transporter genotype (5-HTTLPR): Effects of neutral and undefined conditions on amygdala activation. Biol Psychiatry 61:1011-1014, 2007.

464. Apud J, Mattay VS, Chen J, Kolachana BS, Callicott J, Rasetti R, Alse G, Iudicello J, Akbar N, Egan MF, Goldberg TE, **Weinberger DR**: Tolcopone improves cognition and cortical information processing in normal human subjects. Neuropsychopharmacology 32:1011-1020.

465. Sei Y, Ren-Patterson R, Li Z, Tunbridge EM, Egan MF, Kolachana BS, **Weinberger DR**: Neuregulin 1-induced migration is impaired in schizophrenia: association with neuregulin 1 and COMT gene polymorphisms. Mol Psychiatry (on line), 2007.

466. Straub RE, Lipska BK, Egan MF, Goldberg TE, Callicott JH, Kolachana B, Vakkalanka R, Kleinman JE, **Weinberger DR**: Allelic variation in GAD1(GAD67) is associated with schizophrenia and influences cortical function and gene expression. Mol Psychiatry (on line), 2007.

467. Buchholtz JW, Callicott JH, Kolachana B, Hariri AR, Goldberg TE, Genderson M, Egan MF, Mattay VS, **Weinberger DR**, Meyer-Lindenberg A: Genetic variation in MAOA modulates ventromedial prefrontal circuitry mediating individual differences in human personality. Mol Psychiatry (on line), 2007.

IN PRESS

468. Winterer G, Carver FW, Musso F, Mattay V, **Weinberger DR**, Coppola R: Complex relationship between BOLD signal and synchronization/desynchronization of human brain MEG oscillations. Hum Brain Map (in press).

469. Pezawas L, Meyer-Lindenberg A, Goldman AL, Verchinski BA, Chen G, Kolachana BS, Egan MF, Mattay VS, Hariri AR, **Weinberger DR**: Biologic epistasis between SLC6A4 and BDNF: Complex genetic mechanisms related to depression. PNAS (in press).

470. Apud JA, **Weinberger DR**: Treatment of cognitive deficits associated with schizophrenia: Potential role of COMT inhibitors. Drugs (in press).

471. Huo L, Straub RE, Schmidt PJ, Vakkalanka R, **Weinberger DR**, Rubinow DR: Risk for premenstrual dysphoric disorder is associated with genetic variation in ESR1, the estrogen receptor alpha gene. Biol Psychiatry (in press).

472. Sawa A, **Weinberger DR** et al: Evidence that many of the DISC1 isoforms in C5BL/6J mice are also expressed in 129S6/SvEv mice. Mol Psychiatry (in press).

473. Stein JL, Wiedholz LM, Bassett DS, **Weinberger DR**, Zink CF, Mattay VS, Meyer-Lindenberg A: A validated network of effective amygdala connectivity. NeuroImage (in press).

474. Hashimoto R, Hashimoto H, Shintani N, Chiba S, Hattori S, Okada T, Nakajima M, Tanaka K, Kawagishi N, Nemoto K, Mori T, Ohnishi T, Noguchi H, Hori H, Suzuki T, Iwata N, Ozaki N, Nakabayashi T, Saitoh O, Kosuga A, Tatsumi M, Kamijima K, **Weinberger DR**, Kunugi H, Baba A: Pituitary adenylate cyclase-activating polypeptide is associated with schizophrenia. Mol Psychiatry (in press).

475. Huffaker SJ, Chen J, Sambataro F, Nicodemus KK, Yang F, Mattay VS, Lipska BK, Hyde TM, Song J, Rujescu D, Giegling I, Chang J, Egan MF, Goldberg TE, Kleinman JE, Lu B, **Weinberger DR**: A novel, primate specific brain isoform of KCNH2: Role in cognition, hippocampal biology and association with schizophrenia. Science (in press).

476. Ishizuka K, Chen J, Taya S, Li W, Millar JK, Xu Y, Clapcote S, Hookway C, Morita M, Kamiya A, Tomoda T, Lipska BK, Roder J, Pletnikov M, Portenous D, Sliva AJ, Cannon TD, Kaibuchi K, Brandon

N, **Weinberger DR**, Sawa A: Evidence against a unique pattern of DISC1 protein isoform expression in 129S6/SvEv mice. (in press).

INVITED BOOK CHAPTERS AND REVIEWS

1. Shader RI, **Weinberger DR** and Greenblatt DJ: Psychopharmacological approaches in medically ill patients. In: Psychotherapeutics in Medicine, Karasu TB and Steinmuller RI (eds). Grune and Stratton, Inc., New York, 1978, pp. 117-155.

2. Shader RI, **Weinberger DR** and Greenblatt DJ: Problems with drug interactions in treating brain disorders. Psychiat Clin N Amer 1:51-69, 1978.

3. Bigelow LB, Zalcman S, Kleinman JE, **Weinberger DR**, Luchins D, Tallman J, Karoum F and Wyatt RJ: Propranolol treatment of chronic schizophrenia: Clinical response, catecholamine metabolism and lymphocyte B-receptors. In: Catecholamines: Basic and Clinical Frontiers, Usdin E, Kopin IJ and Barchas JD (eds). Pergamon Press, New York, 1979, pp. 1851-1853.

4. Gillin JC, Kleinman JE, Nasrallah HA, Bigelow LB, Rogol A, Luchins D, Carman J, **Weinberger DR** and Wyatt RJ: Inhibition of dopamine synthesis in chronic schizophrenia: A follow-up study. In: Catecholamines: Basic and Clinical Frontiers, Usdin E, Kopin IJ and Barchas JD (eds). Pergamon Press, New York, 1979, pp. 1839-1841.

5. **Weinberger DR** and Wyatt RJ: Structural brain abnormalities in chronic schizophrenia: Computed tomography findings. In: Perspectives in Schizophrenia Research, Baxter CF and Melnechuk T (eds). Raven Press, 1980, pp. 29-38.

6. Rosenblatt JE, Pary RJ, Bigelow LB, DeLisi LE, Wagner RL, Kleinman JE, **Weinberger DR**, Potkin S, Shiling D, Jeste DV, Alexander P and Wyatt RJ: Measurement of serum neuroleptic concentrations by radioreceptor assay: Concurrent assessment of clinical response and toxicity. Psychopharm Bull 16:78-80, 1980.

7. Kleinman JE, Bigelow LB, Rogol A, **Weinberger DR**, Nasrallah HA, Wyatt RJ and Gillin JC: A clinical trail of 7-OH chlorpromazine in chronic schizophrenia. In: Phenothiazine and Structurally Related Drugs - Basic and Clinical Studies, Usdin E, Eckert H and Forrest IS (eds). Elsevier, North Holland, 1980, pp. 275-278.

8. Rosenblatt JE, Pary RJ, Bigelow LB, DeLisi LE, Wagner RL, Kleinman JE, **Weinberger DR**, Potkin SG, Shiling D, Jeste DV, Alexander P and Wyatt RJ: Measurement of serum neuroleptic concentrations by radioreceptor assay: Concurrent assessment of clinical response and toxicity. In: Neuroreceptors: Basic and Clinical Aspects, Usdin E, Bunney WE and Davis JM (eds). J. Wiley and Sons, England, 1981 pp. 165-188.

9. **Weinberger DR** and Wyatt RJ: Structural pathology of the cerebellum in schizophrenia: CT and post-mortem studies. In: Biological Psychiatry, 1981, Jansson B, Perris C and Struwe G (eds). Elsevier, North Holland, Amsterdam, 1982, pp. 272-258.

10. **Weinberger DR** and Wyatt RJ: Computed tomography (CT) findings in schizophrenia: Clinical and biological implications. In: Biological Psychiatry, 1981, Jansson B, Perris C and Struwe G (eds). Elsevier, North Holland, Amsterdam, 1982, pp. 255-258.

11. Luchins DJ, **Weinberger DR**, Torrey EF and Wyatt RJ: HLA antigens in schizophrenia: Relation to

computed tomography findings and psychopathology. In: Biological Psychiatry, 1981, Jansson B, Perris C and Struwe G (eds). Elsevier, North Holland, Amsterdam, 1982, pp. 85-88.

12. **Weinberger DR** and Wyatt RJ: Cerebral ventricular size: A biological marker for subtyping chronic schizophrenia. In: Biological Markers in Psychiatry and Neurology, Hanin PI and Usdin E (eds). Pergamon Press, Ltd., New York, 1982, pp. 505-512.

13. Luchins DJ, **Weinberger DR**, Torrey EF and Wyatt RJ: HLA and reversed cerebral asymmetries: Possible markers for a subgroup of schizophrenics. In: Biological Markers in Psychiatry and Neurology, Hanin PI and Usdin E (eds). Pergamon Press, Ltd., New York, 1982, pp. 485-493.

14. Karson CN, Freed WJ, Bigelow LB, **Weinberger DR** and Wyatt RJ: Blink rates in schizophrenia. In: Biological Markers in Psychiatry and Neurology, Hanin PI and Usdin E (eds). Pergamon Press, Ltd., New York, 1982, pp. 339-342.

15. Wyatt RJ, Cutler NR, DeLisi LE, Jeste DV, Kleinman JE, Luchins DJ, Potkin SG and **Weinberger DR**: Biochemical and morphological factors in the etiology of the schizophrenic disorders. In: American Psychiatric Association Annual Review, Grinspoon L (ed). APA Press 1982, Washington, D.C., pp. 112-153.

16. **Weinberger DR** and Wyatt RJ: Brain morphology in schizophrenia: In vivo studies. In: Schizophrenia as a Brain Disease, Henn F and Nasrallah H (eds). Oxford University Press, 1982, pp. 148-175.

17. **Weinberger DR** and Wyatt RJ: Enlarged cerebral ventricles in schizophrenia. Psychiatric Annals 13:412-418, 1983.

18. **Weinberger DR**, Wagner RL and Wyatt RJ: Neuropathological studies of schizophrenia: A selective review. Schizophr Bull 9:193-212, 1983.

19. Wyatt RJ and **Weinberger DR**: Future directions for biological exploration of psychiatric disorders. In: Principles of Psychiatric Medicine, Sullivan JL (ed). Butterworths, Boston, 1984, pp. 237-260.

20. **Weinberger DR**: Implications of cerebral ventricular size for response to neuroleptic therapy in schizophrenia. In: Guidelines for Use of Psychotropic Drugs, Garfinkel PE (ed). Spectrum, New York, 1984, pp. 229-237.

21. **Weinberger DR**: The role of x-ray computed tomography in clinical psychiatry. In: Handbook of Psychiatric Diagnostic Procedures, Hall RCW and Beresford TP (eds). Spectrum, New York, 1984, pp. 153-168.

22. Berman KF and **Weinberger DR**: Neuroradiology in psychiatry. Psychiat Clin N America 7:487-501, 1984.

23. Berman KF, **Weinberger DR**, Morihisa JM and Zec RF: Xenon133 inhalation regional cerebral blood flow: Application to psychiatric research. In: Brain Imaging in Psychiatry, Morihisa JM (ed). APA Press, Washington, D.C. 1984, pp. 42-64.

24. Belmaker RH, Stein D, **Weinberger DR**, Potkin SG and Wyatt RJ: CSF Cyclic Nucleotides in Schizophrenia. In: Neurology and Neurobiology - Catecholeamines Part C: Central Nervous System and Neuropharmacology Therapeutic Aspects, Usdin E, Carlsson A, Dahlstrom A, Engel J (eds). New York, Alan R. Liss, Inc., 1984, pp. 173-178, 1984.

25. Stiller JW and **Weinberger DR**: Boxing and chronic brain damage. Psychiat Clin N Amer 8:339-356,

1985.

26. **Weinberger DR**: Clinical-neuropathological correlations in schizophrenia: Theoretical implications. In: Controversies in Schizophrenia, Alpert M (ed), Guilford Press, 1985, pp. 92-109.

27. **Weinberger DR** and Kleinman JE: Observations on the brain in Schizophrenia. In: Psychiatry Update 1986, American Psychiatric Association Annual Review, Volume V, Hales RE, Frances AJ (eds). APA Press, Washington, 1986, pp. 42-67.

28. Grebb JA, **Weinberger DR** and Wyatt RJ: Schizophrenia. In: Diseases of the Nervous System, Asbury AK, McKhan GM and McDonald WI (eds). Saunders WH, Philadelphia, 1986, pp. 897-905.

29. Zec RF and **Weinberger DR**: The relationship between CT scan findings and neuropsychological performance in chronic schizophrenia. Psychiat Clin N Amer 9:49-61, 1986.

30. Zec RF and **Weinberger DR**: Brain areas implicated in Schizophrenia. In: The Neurology of Schizophrenia, Nasrallah HA, **Weinberger DR** (eds). Elsevier N Holland, Amsterdam, 1986, pp. 175-206.

31. Goldberg T and **Weinberger DR**: Methodological Issues in the Neuropsychological Approach to Schizophrenia. In: The Neurology of Schizophrenia, Nasrallah HA, **Weinberger DR** (eds). Elsevier N Holland, Amsterdam, 1986, pp. 141-156.

32. Cadet J-L, Rickler KC and **Weinberger DR**: The clinical neurological examination in schizophrenia. In: The Neurology of Schizophrenia, Nasrallah HA, **Weinberger DR** (eds). Elsevier N Holland, Amsterdam, 1986, pp. 1-48.

33. Kirch D and **Weinberger DR**: Post-mortem histopathological findings in schizophrenia. In: The Neurology of Schizophrenia, Nasrallah HA, **Weinberger DR** (eds). Elsevier N Holland, Amsterdam, 1986 pp. 325-348.

34. Grebb JA, **Weinberger DR** and Morihisa JM: EEG and evoked potential findings in schizophrenia. In: The Neurology of Schizophrenia, Nasrallah HA, **Weinberger DR** (eds). Elsevier N Holland, Amsterdam, 1986, pp. 121-140.

35. Shelton R and **Weinberger DR**: X-ray computerized tomography studies in schizophrenia: A review and synthesis. In: The Neurology of Schizophrenia, Nasrallah HA, **Weinberger DR** (eds). Elsevier N Holland, Amsterdam, 1986, pp. 207-250.

36. Berman KF and **Weinberger DR**: Cerebral blood flow studies of schizophrenia. In: The Neurology of Schizophrenia, Nasrallah HA, **Weinberger DR** (eds). Elsevier N Holland, 1986, pp. 277-308.

37. **Weinberger DR**: The pathogenesis of schizophrenia: A neurodevelopmental theory. In: The Neurology of Schizophrenia, Nasrallah HA, **Weinberger DR** (eds). Elsevier N Holland, 1986, pp. 397-406.

38. Morihisa JM and **Weinberger DR**: Frontal lobe dysfunction in schizophrenia: An organizing theory of relevant anatomy and physiology. In: Can Schizophrenia be Localized in the Brain, Andreasen N (ed). APA Press, 1986, pp. 19-36.

39. Berman KF and **Weinberger DR**: Schizophrenic dementia. In: Neuropsychiatric Dementias, Jeste DV (ed). APA Press, Washington, D.C. 1986, pp. 43-72.

40. Zohar J, Insel TR, Foa EB, Steketee G, Berman KF, **Weinberger DR**, Kozak M, Cohen RM: Physiological and psychological changes during *in vivo* exposure and imaginal flooding of obsessive compulsive disorder

patients. In: Biological Psychiatry 1985, C. Shagass et al. (eds). Elsevier, Amsterdam, 1986, pp. 490-492.

41. Feinstein C and **Weinberger DR**: Brain imaging: Relevance to child psychiatry. In: Handbook of Child Psychiatry, Volume V, Noshpitz J (ed). Basic Books, New York, 1987, pp. 169-177.

42. Jaskiw GE, Andreasen NC, **Weinberger DR**: X-ray computed tomography and magnetic resonance imaging in psychiatry. In: American Psychiatric Association Annual Review, Volume 6, Frances AJ and Hales RE (eds). APA Press, Washington, 1987, pp. 260-299.

43. **Weinberger DR**, Jeste DV, Teychenne PF and Wyatt RJ: Cerebral atrophy in elderly schizophrenic patients: Effects of aging and of long-term institutionalization and neuroleptic therapy. In: Schizophrenia, Paranoia, and Schizophreniform Disorders of Late Life, Miller N and Cohen G (eds). Guilford Press, 1987, pp. 109-118.

44. Myslobodsky MS and **Weinberger DR**: Brain CT asymmetry in schizophrenia and sighting dominance. In: Cerebral Dynamics, Laterality and Psychopathology, Takahashi R, Flor-Henry P, Gruzelier J, Niwa S (eds). Elsevier, Amsterdam, 1987, pp. 439-448.

45. Shelton R, **Weinberger DR**: Brain morphology in schizophrenia. In: Psychopharmacology, The Third Generation of Progress, Meltzer H, Bunney W, Coyle J, Davis K, Kopin R, Schuster R, Shader R and Simpson G (eds). Raven Press, New York, 1987, pp. 773-781.

46. Crow TJ, Berndl K, Bogerts B, Cohen RJ, Flor-Henry P, Ingvar DH, Johnstone EC, Lehmann D, Patterson TE, Shagass C, Straube ER, Taylor PJ and **Weinberger DR**: Structural and Functional Deviations Group Report. In: Biological Perspectives of Schizophrenia, Helmchen H and Henn FA (eds). John Wiley & Sons Ltd., London, 1987, pp. 254-269.

47. Kaufmann CA and **Weinberger DR**: The Neurobiological Basis of Psychiatric Disability. In: Psychiatric Disability: Clinical, Administrative and Legal Aspects, Meyerson AT, Fine T (eds). APA Press, 1987, pp. 23-47.

48. Myslobodsky MS and **Weinberger DR**: Reversed brain anatomical asymmetries in schizophrenia: A search for contributing variables. In: Duality and Unity of the Brain, Ottoson D (ed). MacMillan Press, London, 1987, pp. 367-381.

49. **Weinberger DR**: A neurodevelopmental perspective on brain pathology in schizophrenia. In: Etiopathogenic Hypotheses of Schizophrenia, Sachetti EM (ed). MTP Press, London, 1987, pp. 59-65.

50. **Weinberger DR**: Schizophrenia and the frontal lobes. Trends Neurosci 11:367-370, 1988.

51. Karson CN, Coppola R, Daniel DG, **Weinberger DR**: Computerized EEG in schizophrenia. Schizophr Bull 14:193-198, 1988.

52. Goldberg TE, **Weinberger DR**: Neuropsychological studies of schizophrenia. Schizophr Bull 14:179-184, 1988.

53. **Weinberger DR**, Berman KF: Speculation on the meaning of cerebral metabolic "hypofrontality" in schizophrenia. Schizophr Bull 14:157-168, 1988.

54. **Weinberger DR**, Berman KF, Chase TN: Mesocortical dopamine and human cognition. Ann NY Acad Sci 537:330-338, 1988.

55. Reeve A, Rose DF, **Weinberger DR**: Magnetoencephalography: Applications in psychiatry. Arch Gen

Psychiatry 46:573-576, 1989.

56. Berman KF, **Weinberger DR**: Brain structure and function in schizophrenia. In: Comprehensive Textbook of Psychiatry, Vth ed, Kaplan HI, Sadock BJ (eds). Williams & Wilkins, 1989, pp. 705-717.

57. Goldberg TE, Berman KF, **Weinberger DR**: An orientation to work on the prefrontal cortex in schizophrenia. In: Schizophrenia: A Scientific Focus, Schulz SC, Tamminga CA (eds). Oxford University Press, New York, 1989, pp. 227-246.

58. **Weinberger DR**, Mann U, Gibson RE, Coppola R, Jones DW, Braun AR, Berman KF, Sunderland T, Reba RC, Chase TN: Cerebral muscarinic receptors in primary degenerative dementia as evaluated by SPECT with Iodine-123-labeled QNB. In: Advances in Neurology, Vol. 51, Alzheimers Disease, Wurtman RJ, et al (eds). Raven Press, 1990, pp. 147-150.

59. **Weinberger DR**: Structural and functional brain imaging in psychiatry. J Clin Brain Imaging 1:3-9, 1990.

60. **Weinberger DR**: Schizophrenia: Reasons for optimism. Psychiatry News October 20, 1989, pp. 3-20.

61. Hendren RL, Sholevar GP, **Weinberger DR**, Wiener JM: Grand Rounds in Child and Adolescent Psychiatry: Schizophrenia in a Fourteen Year Old Boy. J Child Psychiatry 29(1):141-148, 1990.

62. Hyde TE, **Weinberger DR**: Schizophrenia and the Brain. Semin Neurology 10:276-286, 1990.

63. Berman KF, **Weinberger DR**: Prefrontal dopamine and defect symptoms in Schizophrenia. In: Negative Schizophrenic Symptoms: Pathophysiology and Clinical Implications, Greden JF, Tanden R, (eds). American Psychiatric Press, Washington, 1990, pp. 81-95.

64. **Weinberger DR**, Suddath R, Casanova M, Christison GW, Torrey EF: Morphometric studies of brain anatomy with MRI in normal monozygotic twins and monozygotic twins discordant for schizophrenia. Clin Neuropharmacol 13(2):164-165, 1990.

65. Berman KF, **Weinberger DR**: The prefrontal cortex in schizophrenia and other neuropsychiatric disorders: In vivo physiological correlates of cognitive disorders. In: Function, Plasticity and Pathology of the Prefrontal Cortical Systems in Human and Animal Nervous System, Vol 85, Uylings HBM (ed). Elsevier, Amsterdam, 1990, pp. 511-527.

66. Breslin NA, **Weinberger DR**: Schizophrenia and the study of the functional development of the prefrontal cortex. Dev Psychopathology 2:409-424, 1991.

67. Daniel DG, **Weinberger DR**: Ex Multi Uno: A case for neurobiological homogeneity in schizophrenia. In: Advances in Neuropsychiatry and Psychopharmacology, Vol 1, Schizophrenia Research, Tamminga C, Schulz SC (eds). Raven Press, New York, 1991, pp. 275-281.

68. **Weinberger DR**: Brain anatomy in schizophrenia: Discussion. In: Search for the Causes of Schizophrenia, Vol II, Haffner H, Grattaz WF (eds). Springer-Verlag, Berlin, 1991, pp. 275-281.

69. Hyde T, Casanova M, Kleinman JE, **Weinberger DR**: Neuroanatomical and neurochemical pathology in schizophrenia. In: American Psychiatric Press Review of Psychiatry, Vol. 10, Tasman A (ed). APPA Press, Washington, D.C., 1991, pp. 7-23.

70. **Weinberger DR**: Anteriomedial temporal-prefrontal connectivity: A functional anatomical system implicated in schizophrenia. In: Psychopathology and the Brain, Carrol BJ and Barnett JE (eds), Raven Press, New York, 1991, pp. 25-42.

71. Berman KF, **Weinberger DR**: Cognitive and physiological factors that affect regional cerebral blood flow and other measures of brain function. In: Radiopharmaceuticals and Brain Pathology Studied with PET and SPECT, Piksic M and Reba RC (eds). CRC Press Inc, Boca Raton, 1991, pp. 427-442.

72. Gold J, **Weinberger DR**: Frontal lobe structure, function and connectivity in schizophrenia. In: Neurobiology and Psychiatry, Volume 1, Kerwin R, et al (eds). Cambridge University Press, Cambridge, 1991, pp. 39-59.

73. Berman KF, **Weinberger DR**: Functional Localization in the Brain in Schizophrenia. In: American Psychiatric Press Review of Psychiatry, Vol. 10, Tasman A (ed). APPA Press, Washington, D.C., 1991, pp. 24-59.

74. **Weinberger DR**: Foreword and Afterword, Section on Schizophrenia. In: American Psychiatric Press Review of Psychiatry, Vol. 10, Tasman A (ed). APPA Press, Washington, D.C., 1991, pp. 5-6, 136-137.

75. Gold JM, Goldberg TE, Kleinman JE, **Weinberger DR**: The Impact of Symptomatic State and Pharmacological Treatment on Cognitive Functioning of Patients with Schizophrenia and Mood Disorders. In: Handbook of Clinical Trials, The Neurobehavioral Approach, E. Mohr and P. Brouwers (eds), Swets and Zeitlinger, Amsterdam, 1991, pp. 185-214.

76. **Weinberger DR**, Berman KF, Daniel DG: Prefrontal cortical function in schizophrenia. In: Frontal Lobe Function and Injury, Levin H , Eisenberg HM, Benton, AL (eds). Oxford Press, London 1991, pp. 275-287.

77. Abi-Dargham A, Jaskiw G, Suddath RL, **Weinberger DR**: Evidence against progression of in vivo anatomical abnormalities in schizophrenia. Schizophr Res 5:210,1991.

78. Breslin NA, **Weinberger DR**: Neurodevelopmental implications of findings from brain imaging studies of schizophrenia. In: Fetal Neural Development and Adult Schizophrenia, Mednick SA, Cannon TD, Barr CE, Lyon M. Cambridge University Press, Cambridge 1991, pp. 199-215.

79. **Weinberger DR**, Berman KF, Daniel DG, Zigun JR, Gorey J, Handel S, Jones DW, Coppola R: Studies of rCBF During Cognitive Activation in Patients with Schizophrenia and Affective Disorder. In: Brain Work and Mental Activity, Lassen NA, Ingvar DH, Raichle ME, Friberg L, (eds). Munksgaard, Amsterdam 1991, pp. 377-391.

80. Casanova MF, Saunders R, Altshuler L, Goldberg T, Armstrong E, **Weinberger DR**, Kleinman JE: Entorhinal cortex pathology in schizophrenia and affective disorders. In: Biological Psychiatry, Racagni G, Brunello N, Fukuda T (eds), Amsterdam: The Netherlands, 1991, pp. 504-506.

81. Daniel DG, Zigun J, **Weinberger DR**: Brain Imaging in Neuropsychiatry. In: The American Psychiatric Press Textbook of Neuropsychiatry, 2nd ed, Yudofsky S, et al (eds). American Psychiatric Press, Washington, D.C. 1992, pp.165-186.

82. Grebb JA, **Weinberger DR**, Wyatt RJ: Schizophrenia. In: Diseases of the Nervous System, Second Edition, Asbury AK, McKhan GM and McDonald WI (eds). WH Saunders, Philadelphia, 1992, pp. 839-848.

83. Zigun J, **Weinberger DR**: *In vivo* studies of brain morphology in patients with schizophrenia. In: New Biological Vistas on Schizophrenia, Lindenmayer J-P and Kay SR (eds). Brunner Mazel, NY 1992, pp. 57-81.

84. **Weinberger DR**: A Neural Systems Approach to the Frontal Lobes. In: Behavioral Neurology-Neural

Systems and Networks -Syllabus, M-M Mesulam (Ed.) American Academy of Neurology, Minneapolis, 1992, pp. 10-31.

85. **Weinberger DR**, Zigun JR, Bartley AS, Jones DW, Torrey EF: Anatomical abnormalities in the brains of monozygotic twins discordant and concordant for schizophrenia. Clin Neuropharm 15 (suppl 1):122A-123A, 1992.

86. **Weinberger DR**, Berman KF, Daniel DG: Mesoprefrontal cortical dopaminergic activity and prefrontal hypofunction in schizophrenia. Clin Neuropharm 15(suppl 1):568A-569A, 1992.

87. **Weinberger DR**, Jones DW, Sunderland T, Lee K-S, Sexton R, Gorey J, Reba R: *In vivo* imaging of cerebral muscarinic receptors with I-123 QNB and SPECT: Studies in normal subjects and patients with dementia. Clin Neuropharm (suppl 1):194A-195A, 1992.

88. **Weinberger DR**, Berman KF, Torrey EF: Correlations between abnormal hippocampal morphology and prefrontal physiology in schizophrenia. Clin Neuropharm (suppl 1):393A-394A, 1992.

89. **Weinberger DR**: Neuroimaging in Neuropsychiatry. In: Neurobiological Disorders in Children and Adolescents, Jossey-Bass, San Francisco, 1992, pp. 77-82.

90. Jaskiw GE, **Weinberger DR**: Dopamine and Schizophrenia: A Cortically Corrective Perspective. Semin Neurosci 4:179-188, 1992.

91. Wolf SS, Hyde TM, **Weinberger DR**: Neuropsychiatry: An update on the neurobiology of schizophrenia. Curr Opinion Neurology Neurosurg 6:86-92, 1993.

92. **Weinberger DR**: Neuroscience in Neuropsychiatry: Insights from Positron Emission Tomography. In: Neuropsychiatry Syllabus, Kleinman JE (ed), American Academy of Neurology, Minneapolis, 1993, pp. 414(1)-414(22).

93. Marsh L, **Weinberger DR**: Structural brain changes in schizophrenia: The issue of subgroups. In: Imaging of the Brain in Psychiatry and Related Fields, Maurer, K (ed). Springer-Verlag, Berlin Heidelberg, New York, 1993, pp. 19-26.

94. Randolph C, Goldberg TE, **Weinberger DR**: The Neuropsychology of Schizophrenia. In: Clinical Neuropsychology, 3rd Ed., K. Heilman, R. Watson, (eds), Oxford, London, 1993, pp. 499-522.

95. Lipska BK, **Weinberger DR**: Cortical Regulation of the Mesolimbic Dopamine System: Implications for Schizophrenia. In: The Mesolimbic Motor Circuit and its Role in Neuropsychiatric Disorders, Kalivas PW (ed), Boca Raton, CRC Press, 1993, pp. 329-349.

96. Goldberg TE, Hyde TM, Kleinman JE, **Weinberger DR**: The course of schizophrenia: Neuropsychological evidence for a static encephalopathy. Schizophr Bull 19:797-804, 1993.

97. **Weinberger DR**: SPECT Imaging in Psychiatry: Introduction and Overview. J Clin Psychiatry 54(11 suppl):3-5, 1993.

98. **Weinberger DR**: Neuroimaging in psychiatry: A status report. In: Borderland of Neurology and Psychiatry, Kleinman JE (ed), AAN Syllabus, Minneapolis, 1994, pp. 111(10-22).

99. Kotrla K, **Weinberger DR**: A neurodevelopmental perspective on normal brain functioning, plasticity and schizophrenia. In: Schizophrenia: Exploring the Spectrum of Psychosis, Ancill RJ, Higenbottam J, Holliday F (eds), John Wiley & Sons, England, 1994, pp. 67-93.

100. **Weinberger DR**: Biological basis of schizophrenia: Structural functional considerations relevant to potential for antipsychotic drug response. J Clin Psychiatry Monograph 12:4-9, 1994.

101. Knable M, **Weinberger DR**: Limbic-prefrontal cortical connectivity and clozapine. J Clin Psychiatry 55(supplA):70-73, 1994.

102. **Weinberger DR**, Aloia M, Berman KF, Goldberg TE: Schizophrenia and the frontal lobes. J Neuropsychiatry 6:419-427, 1994.

103. Goldberg TE, **Weinberger DR**: The effects of clozapine on neurocognition: An overview. J Clin Psychiatry 55(supplB):88-90, 1994.

104. **Weinberger DR**, Berman KF, Gold J, Goldberg T: Neural mechanisms of future-oriented processes: In vivo physiological studies of humans. In: The Development of Future Oriented Processes, Haith M, Benson J, Roberts R, Pennington BS (eds), Chicago, University of Chicago Press 1993, pp. 221-242.

105. **Weinberger DR**: Schizophrenia as a neurodevelopmental disorder. A review of the concept. In: Schizophrenia, Hirsch SR, **Weinberger DR** (eds), Blackwell, London 1995, pp. 294-323.

106. **Weinberger DR**: Neurodevelopmental Perspectives on Schizophrenia. In: Psychopharmacology: A Fourth Generation of Progress, Kupfer D, Bloom F (eds), Raven Press, New York 1995, pp. 1171-1183.

107. Lillrank SM, **Weinberger DR**: Neuroimaging studies of schizophrenia: Implications for a neurodevelopmental model. In: Schizophrenia: An Integrated View, Alfred Benzon Symposium 38, Fog R, Gerlach J, Hemmingsen R (eds), Munksgaard, Copenhagen 1995, pp. 207-216.

108. Gold JM, **Weinberger DR**: Cognitive deficits and the neurobiology of schizophrenia. Curr Opin Neurobiol 5:225-230, 1995.

109. van Horn JD, Berman KF, **Weinberger DR**: Pathophysiology of schizophrenia: Insights from neuroimaging. In: Biology of Schizophrenia and Affective Diseases, Watson SJ (ed), Raven Press, NY, 1995, pp. 419-447.

110. **Weinberger DR**: Basic Neuroscience Aspects of Mental Activity and Mental Illness. In: Borderlands of Psychiatry and Neurology Syllabus, Kleinman JE (ed), American Academy of Neurology, Minneapolis, 1995, pp. 313 (19-37).

111. Lillrank SM, Lipska BK, **Weinberger DR**: Neurodevelopmental animal models of schizophrenia. Clin Neurosci 3:98-104, 1995.

112. Kulynych JJ, **Weinberger DR**: Perspective neurodeveloppementale de d'etiologie de la schizophrenie. In: Recherches Actuelles et Perspectives, Dalery J, d'Amato T (eds), Masson, Paris 1995, pp. 273-288.

113. Knable M, **Weinberger DR**: Are mental diseases brain diseases? The contribution of neuropathology to the understanding of schizophrenic psychoses. Eur Arch Psychiatry Clin Neurosci 245:224-230, 1995.

114. Kotrla KJ, **Weinberger DR**: Brain imaging in schizophrenia. Ann Rev Med 46:113-122, 1995.

115. Goldberg TE, **Weinberger DR**: Thought disorder, working memory, and attention: Interrelationships and the effects of neuroleptic medications. Int J Psychopharm 10:99-104, 1995.

116. Goldberg TE, **Weinberger DR**: A case against subtyping in schizophrenia. Schizophr Res 17:147-151,

1995.

117. Fleming K, Bigelow L, Goldberg TE, **Weinberger DR**: The neurocognitive effects of amphetamine in healthy subjects. Psychopharm Bull 31:357-362, 1995.

118. Wolf SS, **Weinberger DR**: Schizophrenia: A new frontier in developmental neurobiology. Isr J Med Sci 32:51-55, 1996.

119. Lipska BK, **Weinberger DR**: Hippocampal damage in the neonatal rat as a model of some aspects of schizophrenia. In: The Hippocampus: Functions and Clinical Relevance, Kato N (ed), Elsevier Science B.V., 1996, pp. 465-475.

120. **Weinberger DR**: On the Plausibility of the neurodevelopmental hypothesis of schizophrenia. Neuropsychopharmacology 14:S1-11, 1996.

121. Kirkby BS, Berman KF, **Weinberger DR**: Neurodevelopment and schizophrenia: The contribution of functional brain imaging. In: The Neurodevelopmental Hypothesis of Schizophrenia, Waddington JL and Buckley PF (eds), R. G. Landes; TX, 1996, pp. 119-133.

122. Callicott III JH, **Weinberger DR**: Schizophrenia and Intracortical "Dysconnection:" New Insights About Pathophysiology and Mechanisms of Antipsychotic Treatment. In: Critical Issues in the Treatment of Schizophrenia, Brunello N, Racagni C, Langer SZ, Mendlewicz J (eds), Karger, Basel, 1996, pp. 66-76.

123. Berman KF, Daniel DG, **Weinberger DR**: Brain Structure and Function in Schizophrenia. In: The Comprehensive Textbook of Psychiatry VI. Williams and Wilkins, 1995, pp. 910-927.

124. Knable MB, Kleinman JE, **Weinberger DR**: The Neurobiology of Schizophrenia. In: Textbook of Psychopharmacology, Nemeroff CB, Schatzberg AF (eds), American Psychiatric Press, Washington, D.C. 1995, pp. 479-500.

125. Beerpoot L, Lipska BK, **Weinberger DR**: Neurobiology of treatment resistant schizophrenia: New insights and new models. Eur J Neuropsychopharmacology 6:S2-27-S2-34, 1996.

126. **Weinberger DR**, Mattay VS, Callicott J, Kotrla K, Attanagoda S, Moonen CT, Frank J: fMRI applications in schizophrenia research. Neuroimage 4:S118-126, 1996.

127. **Weinberger DR** and Berman KF: Prefrontal function in schizophrenia: Confounds and Controversies. Phil Trans Royal Soc Lond 351:1495-1503, 1996.

128. **Weinberger DR**: The biological basis of schizophrenia: New directions. J Clin Psychiatry 15:4-6, 1997.

129. Bertolino A, **Weinberger DR**: Neuroimaging in schizophrenia: A neurodevelopmental perspective on the involvement of frontal and temporolimbic cortices. Ital J Psychopathology 3:201-207, 1997.

130. Barondes SH, Alberts BM, Andreasen NC, Bargmann C, Benes F, Goldman-Rakic P, Gottesman I, Heinemann SF, Jones EG, Kirschner M, Lewis D, Raff M, Roses A, Rubenstein J, Snyder S, Watson SJ, **Weinberger DR**, Yolken RH: Workshop on schizophrenia. Proc Natl Acad Sci (USA) 94:1612-1614, 1997.

131. Roberts GW, Royston MC, **Weinberger DR**: Schizophrenia: In: Greenfield's Neuropathology, 6th ed., Graham DI and Lantos PL (eds), Arnold Publishing, London, 1996, pp. 897-923.

132. Heinz A, Knable MB, **Weinberger DR**: Dopamine D2 receptor imaging and neuroleptic drug response. J Clin Psychiatry 57(suppl 11):84-88, 1996.

133. Goldberg TE, **Weinberger DR**: Effects of neuroleptic medications on the cognition of patients with schizophrenia: A review of recent studies. J Clin Psychiatry 57(9):62-65, 1996.

134. Lipska BK, **Weinberger DR**: Novel research strategies in the pharmacology of schizophrenia. Psychiatr Interactive 33:103-113, 1997.

135. **Weinberger DR**: What is known about Tourette's syndrome? Scientific American. [On-line]. Available: http://www.sciam.com/askexpert/medicine.html pp. 23-26, 1997

136. Knable MB, **Weinberger DR**: Dopamine, the prefrontal cortex, and schizophrenia. J Psychopharm 11:123-131, 1997.

137. Lipska BK, **Weinberger DR**: Neurorozwojowy model zwierzecy schizofrenii: A neurodevelopmental animal model of schizophrenia. Postepy Psychiatrii i Neurologii 5:369-373, 1996.

138. **Weinberger DR**: On neuroanatomical localization of neuropathological changes in schizophrenia. Schizophr Bull 23:537-540, 1997.

139. Hyde TM, **Weinberger DR**: Seizures and schizophrenia. Schizophr Bull 23:611-622, 1997.

140. **Weinberger DR**, Gallhofer B: Cognitive function in schizophrenia. Int J Clin Psychopharmacology 12:S29-36, 1997.

141. Egan MF, **Weinberger DR**: Neurobiology of schizophrenia. Curr Opin Neurobiology 7:701-707, 1997.

142. Kotrla KJ, Sater AK, **Weinberger DR**: Neuropathology, neurodevelopment and schizophrenia. In: Neurodevelopmental Models of Psychiatric Disorders, Keshavan MS, Murray RM (eds), Cambridge University Press, London, 1997, pp. 187-198.

143. Lipska BK, **Weinberger DR**: Prefrontal cortical and hippocampal modulation of dopamine-mediated effects. In: Advances in Pharmacology, Goldstein DS, Eisenhower G, McCarty R (eds), Academic Press, San Diego, 1997, pp. 806-809.

144. Nemeroff CB, Musselman DL, Schatzberg AF, Knable MB, Kleinman JE, **Weinberger DR**, Kilts CD, Weiss JM: Pathophysiologic basis of psychiatric disorders: Focus on depression and schizophrenia. In: Psychiatry, Tasman A, Kay J, Lieberman J (eds), W. B. Saunders Company, Orlando 1997, pp. 258-311.

145. **Weinberger DR**: Commentary: "Psychiatric Disorders in Candidates for Epilepsy Surgery". Neurology Network Commentary 1:179-183, 1997.

146. Elvevåg B, **Weinberger DR**: Commentary: Schizophrenia and autism considered as the products of an agnosic right shift gene. Cogn Neuropsychiatry 2:221-225, 1997.

147. Elvevåg, B. & Weinberger, D.R. (1997). Schizophrenia and the right shift gene hypothesis: some comments on the devil in the details. (Commentary on Marian Annett's paper "Schizophrenia and autism considered as the products of an agnosic right shift gene"). Cogn Neuropsychiatry 2:221-225, 1997.

148. Raedler TJ, Knable MB, **Weinberger DR**: Schizophrenia as a Developmental Disorder of the Cerebral Cortex. Curr Opin Neurobiology 8:157-161, 1998.

149. Weickert CS, **Weinberger DR**: A candidate molecule approach to defining developmental neuropathology in schizophrenia. Schizophr Bull 24(2):303-316, 1998.

150. **Weinberger DR**: Foreward. In: Textbook of Pediatric Neuropsychiatry, Coffey CE, Brumback B (eds), American Psychiatric Press, Washington, D.C. 1998.

151. Callicott JH, **Weinberger DR**: Neuropsychiatric dynamics: The study of mental illness using functional MRI. Eur J Radiol 30:95-104, 1999.

152. Mattay VS, **Weinberger DR**: Organization of the human motor system as studied by functional MRI. Eur J Radiol 30:105-114, 1999.

153. Bertolino A, **Weinberger DR**: Proton magnetic resonance spectroscopy in schizophrenia. Eur J Radiol 30:132-141, 1999.

154. Callicott JH, **Weinberger DR**: Functional brain imaging: Future prospects for clinical practice. In: Psychiatry in the New Millennium, Weissman S, Sabshin M, Eist H (eds), American Psychiatric Press, Inc., Washington, DC, 1999, pp. 119-135.

155. **Weinberger DR**: Schizophrenia: New Phenes and New Genes. Biol Psychiatry 46:3-7, 1999.

156. Rogue PJ, **Weinberger DR**: Genomics and psychiatry. Trends in Genetics 15:351-352. 1999.

157. McLaughlin AC, Ye FQ, Berman KF, Mattay VS, Frank JA, **Weinberger DR**: Use of diffusible and non-diffusible tracers in studies of brain perfusion. In: Functional MRI, Moonen CTW, Bandettini PA (eds), Springer Verlag, Heidelberg - Medical Radiology Series, 1999, pp. 37-46.

158. Callicott JH, **Weinberger DR**: Functional MRI in Psychiatry. In: Medical Radiology - Diagnostic Imaging and Radiation Oncology, Functional MRI, Moonen C and Bendettini PA (eds), Springer-Verlag, Heidelberg, 1999, pp. 501-512.

159. Lipska BK, Khaing ZZ, **Weinberger DR**: Neonatal hippocampal damage in the rat results in prefrontal cortical dysfunction and dysregulation of the dopamine system: A heuristic model of schizophrenia. Psychiatric Annals 29:157-160, 1999.

160. Davis KL, Braff DL, **Weinberger DR**: Editorial: Protecting research subjects and psychiatric research: We can do both. Biol Psychiatry 46:727-728, 1999.

161. Berman KF, **Weinberger DR**: Functional brain imaging studies in schizophrenia. In: Neurobiological Foundations of Mental Illness, Charney DS, Nestler EJ, Bunney BS (eds), Oxford University Press, New York, 2000, pp. 246-257.

162. Kotrla KJ, **Weinberger DR**: Developmental neurobiology. In: Comprehensive Textbook of Psychiatry VI, Sadock BJ and Sadock VA (eds), Lippincott Williams and Wilkins, 2000, pp. 32-40.

163. Al-Amin HA, **Weinberger DR**: Recent advances in schizophrenia research. In: The Psychopharmacology of Schizophrenia, Reveley MA and Deakin JFW (eds), Arnold Publishing, London, 2000, pp. 1-20.

164. Goldberg TE, **Weinberger DR**: Thought disorder in schizophrenia: A reappraisal of older formulations and an overview of some recent studies. Cogn Neuropsychiatry 5:1-19, 2000.

165. Akil M, **Weinberger DR**: Neuropathology of schizophrenia and the neurodevelopmental model. In: Neuropathology of Schizophrenia, Harrison and Roberts (eds), Oxford University Press, 2000, pp. 189-212.

166. Marenco S, **Weinberger DR**: The neurodevelopmental hypothesis of schizophrenia: Following a trail of

evidence from cradle to grave. Dev Psychopath 12:501-527, 2000.

167. Lipska B, **Weinberger DR**: Early disruption of corticolimbic circuitry as a model of schizophrenia. Contemporary Issues in Modeling Psychopathology, Myslobodsky and Weiner (eds), Kluwer Academic Publishers, 2000, pp. 259-274.

168. Heinz A, Jones DW, Raedler T, Coppola R, Knable MB, **Weinberger DR**: Neuropharmacological studies with SPECT in neuropsychiatric disorders. Nuclear Med Biol 27:677-682, 2000.

169. Heinz A, **Weinberger DR**: Schizophrenia: The neurodevelopmental hypothesis. In: Contemporary Psychiatry, Vol. 3, Henn, Sartorius, Helmchen, and Lauter (eds), Springer-Verlag, 2001, pp. 61-71.

170. **Weinberger DR**: Anxiety at the frontier of molecular medicine. N Engl J Med 344:1247-1249, 2001.

171. McClure RK, **Weinberger DR**: The Neurodevelopmental Hypothesis of Schizophrenia: A Review of the Evidence. In: Current Issues in the Psychopharmacology of Schizophrenia, Breier, Tran, Herrea, Tollefson and Bymaster (eds), Lippincott Williams & Wilkins, 2001, pp. 27-56.

172. **Weinberger DR**: A brain too young for good judgement: Op-ed. New York Times, March 10, 2001.

173. **Weinberger DR**: Concluding Remarks. In: The Postmortem Brain in Psychiatric Research, Vol. 4, Agam G, Everall IP and Belmaker RH (eds), Kluwer Academic Publishers, 2001, pp. 395-402.

174. Gerig G, Styner M, Jones D, **Weinberger D**, Lieberman J: Shape Analysis of Brain Ventricles Using SPHARM. In: Mathematical Methods in Biomedical Image Analysis, IEEE CS press, 2001, pp. 171-178.

175. **Weinberger DR**: Biological phenotypes and genetic research on schizophrenia. World Psychiatry 1:2-6, 2002.

176. **Weinberger DR**, Laruelle M: Neurochemical and neuropharmacological imaging in schizophrenia. In: Psychopharmacology: A Fifth Generation of Progress, Davis KL, Charney D, Coyle JT and Nemeroff C (eds), Lippincott Williams & Wilkins, 2002, pp. 833-855.

177. Elvevåg B, **Weinberger DR**: The Neuropsychology of schizophrenia and its relationship to the neurodevelopmental model. In: Handbook of Developmental cognitive Neuroscience, Nelson CA and Luciana M (eds), MIT Press, 2002, pp. 577-595.

178. **Weinberger DR**: Schizophrenia, the prefrontal cortex, and a mechanism of genetic susceptibility. Eur Psychiatry 4:355-362, 2002.

179. Egan MF, Goldman D, **Weinberger DR**: The human genome mutations. Am J Psychiatry 159:12, 2002.

180. **Weinberger DR**: First Conference: Neurobiology of schizophrenia. Vertex 13:S5-15, 2002.

181. **Weinberger DR**: Second Conference: From phenotype to genotype. Vertex 13:S16-24, 2002.

182. **Weinberger DR**: Third Conference: Model of neural development in schizophrenia. Vertex 13:S25-36, 2002.

183. **Weinberger DR**: Fourth Conference: Why atypical antipsychotics are really atypical? Vertex S13:37-47, 2002.

184. Callicott JH, **Weinberger DR**: Brain imaging as an approach to phenotype characterization for genetic

studies of schizophrenia. In: Psychiatric Genetics: Methods and Reviews, Leboyer M and Bellivier F (eds), Humana Press, 2003, pp. 227-247.

185. Hariri AR, **Weinberger DR**: Imaging genomics. Br Med Bull 65:237-248, 2003.

186. Egan MF, Leboyer M, **Weinberger DR**: Intermediate phenotypes in genetic studies of schizophrenia. In: Schizophrenia, Second Ed, Hirsch SR and Weinberger DR (eds), Blackwell, London, 2003, pp. 277-297.

187. Marenco S, **Weinberger DR**: Obstetric risk factors for schizophrenia and their relationship to genetic predisposition: Following Ariadne's double stranded thread through early development. In: Early Clinical Intervention and Prevention in Schizophrenia, Stone, Faraone, Tsuang (eds), Humana Press, Totowa, NJ, 2003, pp. 43-74.

188. Winterer G, **Weinberger DR**: Cortical signal-to-noise ratio: Insight into the pathophysiology and genetics of schizophrenia. Clin Neurosci Res 3:55-66, 2003.

189. **Weinberger DR**: Dopamine, the prefrontal cortex, and genetic mechanism of schizophrenia. In: Dopamine in the Pathophysiology and Treatment of Schizophrenia, Kapur S and Lecrubier Y (eds), Martin Dunitz, London, 2003, pp. 129-154.

190. Heinz A, Romero B, Gallinat J, Juckel G, **Weinberger D**: Molecular brain imaging and the neurobiology and genetics of schizophrenia. Pharmacopsychiatry 36:S152-157, 2003.

191. Hariri AR, **Weinberger DR**: Functional neuroimaging of genetic variation in serotonergic neurotransmission. Genes, Brain and Behav 2:341-349, 2003.

192. **Weinberger DR**, Marenco S: Schizophrenia as a Neurodevelopmental Disorder. In: Schizophrenia, Second Edition, Hirsch SR and Weinberger DR (eds), Blackwell, London, 2003, pp. 326-348.

193. Lipska B and **Weinberger DR**: Animal models of Schizophrenia. In: Schizophrenia, Second Edition, Hirsch SR and Weinberger DR (eds), Blackwell, London, 2003, pp. 388-402.

194. Marenco S, **Weinberger DR**: Evolution of molecular targets for antipsychotic therapy (Evoluzione dei siti d'azione molecolari per il trattamento delle psicosi). Ital J Psychopathol 1:3-9, 2003.

195. **Weinberger DR:** Deficit syndromes: New molecular targets for treatment. Clin Psychiatry News (Suppl) 14-15, 2003.

196. Weickert TW, Goldberg TE, Mishara A, Apud JA, Kolachana BS, Egan MF, **Weinberger DR**: Catechol-O-Methyltransferase $val^{108/158}$Met genotype predicts working memory response to antipsychotic medications. Biol Psychiatry 56:677-682, 2004.

197. Marenco S, **Weinberger DR**, Bertolino A: MR proton spectroscopy. In: Schizophrenia: From Neuroimaging to Neuroscience, Lawrie SR, Johnstone EC and Weinberger DR (eds). Oxford Press, London, 2004.

198. Preston GA, **Weinberger DR**: Intermediate phenotypes in schizophrenia: A selective review. Dialogues Clin Neurosci 7:165-179, 2005.

199. Winterer G, Hariri A, Goldman D, **Weinberger DR**: Neuroimaging and Human Genetics. In: International Review of Neurobiology, Neuroimaging Part B, Glabus MF (ed). Elsevier, Academic Press 67:325-383, 2005.

200. **Weinberger DR**: Editorial: New Directions in Psychiatric Therapeutics. NeuroRx 3(1):January 2006.

201. Marenco S, Bertolino A, **Weinberger DR**: In vivo NMR measures of NAA and the neurobiology of schizophrenia. In: N-Acetylaspartate: A Unique Neuronal Molecule in the Central Nervous System, Vol. 576, Moffett JR, Tieman SB, **Weinberger DR**, Coyle JT, Namboodiri AMA (eds). Springer, New York, 2006, pp. 227-240.

202. Roffman JL, Weiss AP, Goff DC, Rauch SL, **Weinberger DR**: Neuroimaging-genetic paradigms: A new approach to investigate pathophysiology and treatment of cognitive deficits in schizophrenia. Harvard Res of Psychiatry 14:78-91, 2006.

203. Mattay VS, Meyer-Lindenberg A, **Weinberger DR**: Imaging genetics. In: Methods in Mind, Senior C, Russell T, Gassaniga MS (eds). The MIT Press, Cambridge, MA, 2006, pp. 263-290.

204. Straub RE, **Weinberger DR**: Editorial: Schizophrenia Genes: Famine to feast. Biol Psychiatry 60:81-83, 2006.

205. Agid Y, Buzsaki G, Diamond DM, Frackowiak R, Giedd J, Girault JA, Grace A, Lambert JJ, Manji H, Mayberg H, Popoli M, Prochiantz A, Richter-Levin G, Somogyi P, Spedding M, Svenningsson P, **Weinberger DR**: How can drug discovery for psychiatric disorders be improved? Nat Rev Drug Discov 6:189-201, 2007.

IN PRESS

206. **Weinberger DR**: Neurochemical and neurophysiological mechanisms in schizophrenia. Psychiatria Biologica (Brasil) (in press).

207. Heinz A, Braus DF, Romero B, Gallinat J, Juckel G, **Weinberger DR**: Genetischer und medikamentöser Einfluss auf die Funktion des präfrontalen Kortex schizophrener Patienten. Nervenarzt (in press).

208. Berger G, **Weinberger DR**: Schizophrenia genetics. In: The Recognition and Management of Early Psychosis: A Preventative Approach, Second Edition, Jackson, HJ & McGorry PD (eds). Cambridge University Press, Cambridge, UK, (in press).

209. Buckholtz JW, Sust S, Tan HY, Mattay VS, Straub RE, Meyer-Lindenberg A, **Weinberger DR**, Callicott JH: fMRI evidence for functional epistasis between COMT and RGS4. Mol Psychiatry (in press).

210. Hariri A, **Weinberger DR**: Emotional disorders: Genetics of human fear disorders. The New Encycl of Neurosci, edited by Larry Squire et al, (in press).

SELECTED COMMENTARIES and LETTERS

1. Cherubin CE, Kane S, **Weinberger DR**, Wolfe E and McGinn T: Medical problems of ex-drug addicts at Daytop Village. Proceedings of the 52nd Annual Meeting of the American College Physicians, Denver, Colorado, March, 1971.

2. **Weinberger DR**: Tricyclic choice for ill elderly patients. Am J Psychiatry 134:1048, 1977.

3. **Weinberger DR** and Wyatt RJ: Catatonic stupor and neuroleptic drugs. JAMA 239:1846, 1978.

4. Jeste DV, **Weinberger DR**, Zalcman S and Wyatt RJ: Computed tomography in tardive dyskinesia. Br J Psychiatry 136:606-607, 1980.

5. **Weinberger DR** and Wyatt RJ: Schizophrenia and cerebral atrophy. Lancet i:1130, 1980.

6. Donnelly EF, Waldman IN, Reider RO and **Weinberger DR**: Neuropsychological assessment and chronic schizophrenia. Biol Psychiatry 15:649-650, 1980.

7. Nasrallah HA, Kleinman JE, **Weinberger DR**, et al: Cerebral ventricular enlargement and dopamine synthesis inhibition in chronic schizophrenia. Arch Gen Psychiatry 37:1427, 1980.

8. **Weinberger DR**, Luchins DJ, Kleinman JE and Wyatt RJ: The hippocampus in schizophrenia: A controlled post-mortem study. Proceedings of the 35th Annual Society of Biological Psychiatry Annual Meeting Boston, 1980.

9. **Weinberger DR**, Luchins DJ, Kleinman JE, Morihisa JM and Wyatt RJ: The Yakovlev Collection: A resource for psychiatry. Proceedings of the 134th Annual Meeting of the American Psychiatric Association New Orleans, 1981.

10. **Weinberger DR**: Commentary: On Image Consciousness. Int Psychiatry 1:146, 1983.

11. DeLisi LE, Schwartz CC, Targum SD, Byrnes SM, Cannon-Spoor E, **Weinberger DR**, Wyatt RJ: Ventricular brain enlargement and outcome of acute schizophreniform disorder. Psychiatry Res 9:169-171, 1983.

12. Mered B, Albrecht P, Torrey EF, **Weinberger DR**, Potkin SG, Winfrey CJ: Failure to isolate virus from CSF of schizophrenics. Lancet ii:919, 1983.

13. **Weinberger DR**: Brain imaging techniques and their usefulness in psychiatry. Hosp Comm Psych 35:325-326, 1984.

14. **Weinberger DR**, Kaufmann CA, Stevens JR, et al: Inoculation of Schizophrenic Brains to Rodents and Primates. Behavioral and Neuropathological Observations. Proc. First World Congress on Virus Diseases and Mental Health Montreal, 1984.

15. LeWitt PJ, Tellow R, Sheth A, **Weinberger DR**: Cerebral ventricular enlargement as a biological marker of schizophrenia. Ann Neurol 18:147, 1985.

16. **Weinberger DR**, Kaufmann CA, Stevens JR, Asher DM, et al: Inoculation of schizophrenic brains to rodents and primates: Behavioral and neuropathological observations. Progress in Neuro-Psychopharmacology and Biological Psychiatry 9(3):307, 1985.

17. **Weinberger DR**, Berman KF, Chase TN: Prefrontal cortex physiological activation in Parkinson's

Disease: Effect of L-dopa. Neurology 36(Suppl.1):170, 1986.

18. **Weinberger DR**, Berman KF: Activation of inferior parietal-posterior temporal cortex in Alzheimer's Disease: An rCBF study. Neurology 36(Suppl.1):132-133, 1986.

19. **Weinberger DR**, Rickler KC, Kleinman JE: Commentary: Functional psychosis and viral encephalitis. Int Psychiatry 4:232-233, 1986.

20. **Weinberger DR**, Coppola R, Burrows H, Berman KF, Chase TN: A comparison of high resolution 18FDG PET and Xenon-133 inhalation rCBF in Alzheimers Disease. Neurology 37(Suppl.1):329, 1987.

21. **Weinberger DR**, Berman KF, Zec RF, Chase TN: rCBF studies of pathophysiologic mechanisms in "subcortical dementia." J Cereb Blood Flow Metabolism 7(Suppl.1):400, 1987.

22. **Weinberger DR**, Berman KF, Iadarola M, Driesen N, Karson C, Coppola R: Head size in schizophrenia. Arch Gen Psychiatry 44:672, 1987.

23. Jaskiw GE, **Weinberger DR**: The prefrontal cortex-accumbens circuit. Who's in charge? Behav Brain Sciences 10:217-218, 1987.

24. **Weinberger DR**: Premorbid neuropathology in schizophrenia. Lancet ii:445, 1988.

25. **Weinberger DR**: Neurodevelopmental model of schizophrenia. Arch Gen Psychiatry 45:1053-1054, 1988.

26. **Weinberger DR**, Mann U, Reba RC, Jones DW, Coppola R, Gibson RE, Chase TN: Comparison of 18FDG PET and 123I-QNB SPECT in patients with dementia. J Nucl Med 30:896, 1989.

27. Berman KF, Illowsky-Karp BP, **Weinberger DR**: Inferior parietal region implicated in neurocognitive impairment in schizophrenia. In reply. Arch Gen Psychiatry 46:759-760, 1989.

28. Casanova MF, Zito M, Goldberg TE, Suddath RL, Torrey EF, Bigelow LB, Sanders RD, **Weinberger DR**: Corpus callosum curvature in schizophrenic twins. Biol Psychiatry 27:83-85, 1990.

29. Goldberg T, Berman K, **Weinberger DR**: Teaching the Wisconsin Card Sorting Test to Schizophrenic Patients. In reply. Arch Gen Psychiatry 47:91, 1990.

30. **Weinberger DR**, Suddath RL, Torrey EF, Christison GW, Casanova MF: Abnormalities of the brain and schizophrenia. N Engl J Med 323:458, 1990.

31. Jones DW, Saunders RC, Gorey JG, Hosain PP, Coppola R, Reba RC, **Weinberger DR**: Dynamic SPECT comparison of I-123-QNB kinetics and blood flow (Tc-99m-ECD) in monkey. J Nucl Med 31:707, 1990.

32. Jones DW, Nissen KF, Saunders RC, Rommer P, **Weinberger DR**: Ultra-high resolution SPECT collimator for tomography of radiopharmaceutical uptake in monkey brains. J Nucl Med 31:870, 1990.

33. Randolph C, Goldberg TE, Gold J, Daniel DG, **Weinberger DR**: Left-handedness and ventricle size in schizophrenic patients. Am J Psychiatry 147:5, 1990.

34. **Weinberger DR**, Suddath RL, Casanova MF, Torrey EF, Kleinman JE: Crow's "Lateralization Hypothesis" for Schizophrenia. Arch Gen Psychiatry 48:85, 1991.

35. **Weinberger DR**: Hippocampal injury and chronic schizophrenia. Biol Psychiatry 29:509-510, 1991.

36. Goldberg TE, **Weinberger DR**: Impaired Wisconsin Card Sort performance in schizophrenia may reflect motivational deficits. To The Editor. Arch Gen Psychiatry 48:282, 1991.

37. Zigun JR, Daniel DG, Kleinman JE, **Weinberger DR**: Gender differences in schizophrenia. Am J Psychiatry 148:1754-1755,1991.

38. Goldberg TE, Torrey EF, **Weinberger DR**: Matching for education in studies of schizophrenia. In reply. Arch Gen Psychiatry 49:246, 1992.

39. Goldberg TE, Torrey EF, **Weinberger DR**: Neuropsychological performance in the unaffected twin. In reply. Arch Gen Psychiatry 49:247,1992.

40. Zigun JR, Daniel DG, Kleinman JE, **Weinberger DR**: Ventricular enlargement in schizophrenia: Is there really a gender effect? Arch Gen Psychiatry 49:995, 1992.

41. **Weinberger DR**, Berman KF, Ostrem JL, Torrey EF: rCBF measured by O-15 water and PET during four cognitive tasks in MZ twins discordant for schizophrenia. J Cereb Blood Flow Metab 13:S511, 1993.

42. **Weinberger DR**, Zigun JR, Barrios FA, Moonen CTW, Sobering G, Press DT, Coppola R, Frank JA: A gradient echo method for functional MR imaging of dynamic susceptibility effects in whole brain slices. J Cereb Blood Flow Metab 13:S822, 1993.

43. **Weinberger DR**, Goldberg TE, Tamminga CA: Images in neuroscience. Am J Psychiatry 152(3):330-332, 1995.

44. **Weinberger DR**, Lipska BK: Animal modeling of schizophrenia. Qtrly J Nucl Med 39:18, 1995.

45. Charney DS, Davis KL, Nemeroff CB, **Weinberger DR**: Increasing public trust and confidence in psychiatric research. Biol Psychiatry 46:1-2, 1999.

46. Davis KL, Braff DL, **Weinberger DR**: Protecting research subjects and psychiatric research: We can do both. Biol Psychiatry 46:727-728, 1999.

47. **Weinberger DR**: In Memoriam: Richard Jed Wyatt, 1939-2002. Neuropsychopharmacology 27:687-689, 2002.

48. **Weinberger DR**: Neurotoxicity, neuroplasticity, and magnetic resonance imaging morphometry. In reply. Arch Gen Psychiatry 60:846, 2003.

49. **Weinberger DR**: Section Editor: *Psychosis* In: Neurobiology of Mental Illness (Second ed). Charney DS and Nestler EJ (eds), Oxford University Press, 2004, pp. 237-354.

50. Nicodemus KK, Luna A, Vakkalanka R, Goldberg TE, Egan MF, Straub RE, **Weinberger DR**: Further evidence for association between ErbB4 and schizophrenia and influence on cognitive intermediate phenotypes in healthy controls. Mol Psychiatry, 11:1062-1069, 2006.

BOOKS

1. Nasrallah HA, **Weinberger DR** (eds): The Neurology of Schizophrenia. Elsevier N. Holland Press, Amsterdam, 1986.

2. Roberts G, Leigh H, **Weinberger DR**: Neuropsychiatric Disorders. Mosby, London, 1993.

3. Hirsch SR, **Weinberger DR** (eds): Schizophrenia. Blackwell, London, 1995.

4. Hirsh SR, **Weinberger DR** (eds): Schizophrenia II. Blackwell, London, 2004.

5. Fu CHY, Senior C, Russell T, **Weinberger DR**, Murray R (eds): Neuroimaging in Psychiatry. Martin Dunitz Ltd, London, 2005.

6. Lawrie SR, Johnstone EC, **Weinberger DR** (eds): Schizophrenia: From Neuroimaging to Neuroscience. Oxford Press, London, 2005.

7. Moffett JR, Tieman SB, **Weinberger DR**, Coyle JT, Namboodiri AMA (eds): N-Acetylaspartate: A Unique Neuronal Molecule in the Central Nervous System, Vol. 576. Springer, New York, 2006.